FILE COVERS 1907 - 2 Jan 2009 VOL 150 ISS 2
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This file contains CAS Registry Numbers for easy and accurate
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'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

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=> d stat que L52
L44          22 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOV L?/AU
L45          55 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  SHVARTSMAN I?/AU
L46          13 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  LYALINA I?/AU
L47          19 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOVA B?/AU
L49          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND (L45 OR L46
                OR L47)
L50           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L45 AND (L46 OR L47)
L51           2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L46 AND L47
L52          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L49 OR L50 OR L51


=> d stat que L55
L44          22 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOV L?/AU
L45          55 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  SHVARTSMAN I?/AU
L46          13 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  LYALINA I?/AU
L47          19 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOVA B?/AU
L54       38813 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  ?FULLEREN?/BI
L55          11 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  (L44 OR L45 OR L46 OR
                L47) AND L54


=> d stat que L57
L5       207299 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  AMINO ACID?/CW
L44          22 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOV L?/AU
L45          55 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  SHVARTSMAN I?/AU
L46          13 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  LYALINA I?/AU
L47          19 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOVA B?/AU
L49          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND (L45 OR L46
                OR L47)
L50           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L45 AND (L46 OR L47)
L51           2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L46 AND L47
L52          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L49 OR L50 OR L51
L54       38813 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  ?FULLEREN?/BI
L55          11 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  (L44 OR L45 OR L46 OR
                L47) AND L54
L57           2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L5 AND (L52 OR L55)
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=> s L52 or L55 or L52
L60         18 L52 OR L55 OR L52

=> file medline embase biosis wpix
FILE 'MEDLINE' ENTERED AT 16:12:21 ON 02 JAN 2009

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=> d stat que L53
L44          22 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOV L?/AU
L45          55 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  SHVARTSMAN I?/AU
L46          13 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  LYALINA I?/AU
L47          19 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOVA B?/AU
L49          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND (L45 OR L46
                OR L47)
L50           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L45 AND (L46 OR L47)
L51           2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L46 AND L47
L52          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L49 OR L50 OR L51
L53          14 SEA L52


=> d stat que L58
L44          22 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOV L?/AU
L45          55 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  SHVARTSMAN I?/AU
L46          13 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  LYALINA I?/AU
L47          19 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOVA B?/AU
L58           9 SEA (L44 OR L45 OR L46 OR L47) AND ?FULLEREN?


=> d stat que L59
L44          22 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOV L?/AU
L45          55 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  SHVARTSMAN I?/AU
L46          13 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  LYALINA I?/AU
L47          19 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  RASNETSOVA B?/AU
L49          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L44 AND (L45 OR L46
                OR L47)
L50           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L45 AND (L46 OR L47)
L51           2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L46 AND L47
L52          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L49 OR L50 OR L51
L53          14 SEA L52
L58           9 SEA (L44 OR L45 OR L46 OR L47) AND ?FULLEREN?
L59           3 SEA (L53 OR L58) AND AMINO ACID?


=> s L53 or L58 or L59
L61         14 L53 OR L58 OR L59

=> dup rem L60 L61
FILE 'ZCAPLUS' ENTERED AT 16:12:55 ON 02 JAN 2009
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FILE 'WPIX' ENTERED AT 16:12:55 ON 02 JAN 2009
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PROCESSING COMPLETED FOR L60
PROCESSING COMPLETED FOR L61
L62          19 DUP REM L60 L61 (13 DUPLICATES REMOVED)
                ANSWERS '1-18' FROM FILE ZCAPLUS
                ANSWER '19' FROM FILE WPIX

=> d ibib abs hitind L62 1-18; d iall hit L62 19

L62  ANSWER 1 OF 19  ZCAPLUS  COPYRIGHT 2009 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2008:1359611  ZCAPLUS  Full-text
DOCUMENT NUMBER:          149:519138
TITLE:                    Ophthalmological gel and a method for the use thereof
INVENTOR(S):              Rasnetsov, Lev Davidovich; Shvartsman, Iakov
                          Yudelevich; Yashnova, Olga Konstantinovna; Melnikova,
                          Nina Borisovna; Kolchik, Olga Vladimirovna; Gusikhina,
                          Maria Sergeevna
PATENT ASSIGNEE(S):       Russia
SOURCE:                   PCT Int. Appl., 25pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Russian
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
     WO 2008136707        A1    20081113    WO 2008-RU259          20080423
         W:  AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
             CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,
             FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
             ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
             PL, PT, RO, RS, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
             IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
             TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
     RU 2340327           C1    20081210    RU 2007-116779         20070503
PRIORITY APPLN. INFO.:                     RU 2007-116779      A  20070503
AB    The invention relates to medicine.  The inventive ophthalmol. gel comprises
      0.2-0.5% low-cross-linked polyacrylic acid and/ or derivs. thereof,
      preservatives, stabilizers, a medicinal substance selected from a reparant
      group and clean water, and has a pH value within the range of lachrymal liquid
      The gel contains 1-(β-oxyethyl)-4,6-dimethyl-1,2- dihydro-2-oxypyrimidine
      (xymedon) in the form of a medicinal substance. The inventive gel production
      method consists in adding an aqueous 10-30% polyethylene oxide solution into a
      dry powder of low-cross-linked polyacrylic acid associated with rapid
      agitation, polyethylene oxide being taken at least in a tenfold excess with
      respect to the mass of the powder, in adding, while agitating, clean water in
      a quantity equal to 70-90% the total mass of the gel, in adjusting a pH value
      to a value of 6.0-7.0 by means of a sodium hydroxide solution, in adding,
      while agitating, an alkali stabilizer, preservative and antibiotic solution,
      which is previously prepared in a sep. reactor, by mixing the aqueous solns.
      of benzalkonium chloride, disodium edetate and gentamicin sulfate, in
      subsequently adding a 10-20% sodium hydroxide solution, in adding xymedon at a
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mass concentration of 1-10%, in adjusting, for the second time, the pH value to a required value by means of a sodium hydroxide solution and in sterilizing the thus produced gel.

CC 63-6 (Pharmaceuticals)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 2 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2008:42992 ZCAPLUS Full-text

DOCUMENT NUMBER: 148:128281

TITLE: Nootropic medicinal agent

INVENTOR(S): Rasnetsov, Lev Davidovich; Shvartsman, Iakov Yudelevich; Yashnova, Olga Konstantinovna; Melnikova, Nina Borisovna; Petryakova, Olga Vladimirovna; Gulyaev, Ivan Valeryevich

PATENT ASSIGNEE(S): Russia

SOURCE: PCT Int. Appl., 26pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008004908	A1	20080110	WO 2007-RU326	20070615
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RU 2322240	C1	20080420	RU 2006-124117	20060705

PRIORITY APPLN. INFO.: RU 2006-124117 A 20060705

AB The invention relates to medicine, in particular to neurol. and psychiatry and can be used in the form of an agent for normalizing the physiol. and functional activity of the central nervous system of brain intellectual function. The inventive medicinal agent exhibits a nootropic activity and comprises dimephosphone in the form of an active substance. Said medicinal agent is embodied in the form of an aqueous solution and also comprises citric acid and lithium carbonate at the following component ratio: 5.0-30.0 mass% dimephosphone, 0.5-5.0 mass% lithium carbonate, 3.0-4.0 mass% citric acid, the rest up to 100% being deionized water. The medicinal agent in the form of a syrup has the following component ratio: 3.0-5.0 mass% dimephosphone, 1.0-1.2 mass% lithium carbonate, 4.0-5.0 mass% citric acid and 89-92.0 mass% sixty-four percentage sugar syrup. A syrup having a high concentration of dimephosphone and a glycerin-containing syrup are also disclosed as the variants of the invention. Said medicinal agents have more physiol. pH values exhibited within an extended range of concns., are characterized by the high dilution stability of the solns. and have a delectable flavor, thereby easing the use thereof in a child treatment form.

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 3 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2008:10448 ZCAPLUS Full-text
DOCUMENT NUMBER: 148:106213
TITLE: Pharmaceutical composition for treating burns and a method for its production
INVENTOR(S): Rasnetsov, Lev Davidovich; Shvartsman, Iakov Yudelevich; Yashnova, Olga Konstantinovna; Melnikova, Nina Borisovna; Sorokin, Pavel Vladimirovich; Zimnyakova, Olga Evgenyevna
PATENT ASSIGNEE(S): Russia
SOURCE: PCT Int. Appl., 25pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008002196	A1	20080103	WO 2007-RU327	20070615
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RU 2317811	C1	20080227	RU 2006-121794	20060619
PRIORITY APPLN. INFO.:			RU 2006-121794 A	20060619

AB The invention relates to medicine, in particular to soft medicinal agents for external application (ointment, gels, emulsions, liniments) and can be used for treating thermal, solar and chemical burns of human beings and animals. The inventive pharmaceutical composition for treating burns is embodied in the form of a gel and contains an active substance N-(β-oxyethyl)-4,6-dimethyldihydropyrimidone-2 (xymedon), a gel former, a moisture retaining agent and distilled water. The gel former can be embodied in the form of sodium, CM-cellulose, sodium alginates or the mixture thereof and the moisture retaining agent is embodied in the form of glycerin. In the other embodiments, addnl. to xymedon, the composition can contain an active substance in the form of silver nitrate or silver nitrate and sodium sulphacyl or levomycetin and succinic acid. The test have proved the high efficiency of said composition, which meets all the medical and biol. requirements of modern medicinal agents used for treating burns and wounds. The pharmaceutical composition is embodied in the form of a gel and can be used as highly efficient regenerating, wound-healing and micro-circulation improving means for treating infected burn wound.

CC 63-6 (Pharmaceuticals)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 4 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2008:1133434 ZCAPLUS Full-text
DOCUMENT NUMBER: 149:386541

TITLE: Antiviral medicine
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.
PATENT ASSIGNEE(S): Russia
SOURCE: Russ., 4pp.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2333753	C1	20080920	RU 2007-107866	20070302

PRIORITY APPLN. INFO.: RU 2007-107866 20070302

AB The invention concerns the chemical pharmaceutical industry, particularly a medicine for treatment of viral disease, including HIV infection (AIDS and HIV related diseases). The antiviral medicine is a solution containing fullerene-polyhydropolyaminocaproic acid and DMSO in the following component content per ampoule: fullerene-polyhydropolyaminocaproic acid 50 mg, DMSO up to 0.5 mL. The medicine is intended for i.m. or i.v. (drip-feed) administration, and is dissolved in 20 mL of water for i.m. administration, while the variant for i.v. administration includes addnl. 20 mL of 0.9% sodium chloride solution per 1 ampoule. This provides an antiviral medicine for treatment of virus diseases including HIV infection.

CC 63-6 (Pharmaceuticals)
ST AIDS HIV virucide soln injection fullerene
IT Fullerenes
Polyamides, biological studies
RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(antiviral injection solution)
IT 25038-54-4D, Poly(6-aminocaproic acid), reaction product with fullerenes, biological studies 99685-96-8, Fullerene 99685-96-8D, Fullerene, reaction products with poly(aminocaproic acid) 131159-39-2, Fullerene
RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(antiviral injection solution)

L62 ANSWER 5 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 2008:1133379 ZCAPLUS Full-text
DOCUMENT NUMBER: 149:386539
TITLE: Antiviral medicine
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.
PATENT ASSIGNEE(S): Russia
SOURCE: Russ., 4pp.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2333752	C1	20080920	RU 2007-107864	20070302

PRIORITY APPLN. INFO.: RU 2007-107864 20070302

AB The invention concerns the chemical pharmaceutical industry, particularly medicine for treatment of virus diseases, including HIV infection (AIDS and

HIV-related diseases). The antiviral medicine is a 1% ointment containing fullerene-polyhydropolyaminocaproic acid as active substance and auxiliary substances of dimethylsulfoxide, water-free lanolin and Vaseline in the following amount (g): fullerene-polyhydropolyaminocaproic acid 1.0, dimethylsulfoxide 10.0, water-free lanolin 10.0, Vaseline up to 100.0. This provides an antiviral medicine for treatment of virus diseases, including HIV infection.

CC 63-6 (Pharmaceuticals)

ST HIV AIDS virucide ointment fullerene

IT Fullerenes

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiviral ointment for AIDS)

IT 25038-54-4D, Poly(6-aminocaproic acid), reaction products with fullerenes, biological studies 99685-96-8, Fullerene 99685-96-8D, Fullerene, reaction products with poly(aminocaproic acid) 131159-39-2, Fullerene

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiviral ointment for AIDS)

L62 ANSWER 6 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 2008:1133377 ZCAPLUS Full-text

DOCUMENT NUMBER: 149:386538

TITLE: Antiviral medicine

INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.

PATENT ASSIGNEE(S): Russia

SOURCE: Russ., 4pp.
CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2333751	C1	20080920	RU 2007-107863	20070302

PRIORITY APPLN. INFO.: RU 2007-107863 20070302

AB The invention concerns the chemical pharmaceutical industry, particularly medicine for treatment of virus diseases, including HIV infection (AIDS and HIV-related diseases). The antiviral medicine is a suppository containing fullerene-polyhydropolyaminocaproic acid and auxiliary substances of dimethylsulfoxide, water-free lanolin or vegetable oil selected out of olive, peach, pumpkin seed oil, and a base selected out of W-35 or H-15 Witepsol, cacao butter, solid fat, in the following amount per one 2 g suppository: fullerene-polyhydropolyaminocaproic acid 5-20 mg, dimethylsulfoxide 50-200 mg, water-free lanolin or vegetable oil 20-100 mg, the rest being the base. This provides an antiviral medicine for treatment of virus diseases, including HIV infection.

CC 63-6 (Pharmaceuticals)

IT Fullerenes

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiviral suppositories)

IT 25038-54-4D, Poly(6-aminocaproic acid), reaction products with fullerenes, biological studies 99685-96-8D, Fullerene, reaction products with poly(aminocaproic acid)

RL: MOA (Modifier or additive use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiviral suppositories)

IT 99685-96-8, Fullerene 131159-39-2, Fullerene
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antiviral suppositories)

L62 ANSWER 7 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 7
ACCESSION NUMBER: 2008:171241 ZCAPLUS Full-text
DOCUMENT NUMBER: 148:222016
TITLE: Anti-viral agent for systemic application
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.
PATENT ASSIGNEE(S): Russia
SOURCE: Russ., 5pp.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2316321	C1	20080210	RU 2006-121805	20060619

PRIORITY APPLN. INFO.: RU 2006-121805 20060619
AB The invention pertains to the pharmaceutical industry, in particular to agents for viral disease treatment including HIV infection (AIDS and HIV-associated diseases). The claimed agent is in the form of a solution for i.v. administering and contains per 1 ampoule 3 % concentrate of Fullevir (fullerenopolyaminocaproic acid sodium salt) 1 g and water for injection up to 1 mL. Addnl. it contains 0.9 % solution of sodium chloride or 10 % solution of human albumen in amount of 100 mL per 1 ampoule. This decreased viral load in lymphocytes and blood serum and increased amount of CD-4 cells.
CC 63-6 (Pharmaceuticals)

L62 ANSWER 8 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 2008:171240 ZCAPLUS Full-text
DOCUMENT NUMBER: 148:222015
TITLE: Anti-viral agent
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.
PATENT ASSIGNEE(S): Russia
SOURCE: Russ., 6pp.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2316320	C1	20080210	RU 2006-121806	20060619

PRIORITY APPLN. INFO.: RU 2006-121806 20060619
AB The invention pertains to the pharmaceutical industry, in particular agents for viral disease treatment including HIV infection (AIDS and HIV-associated diseases). The claimed agent, in form of a suppository, contains per one 2 g suppository Fullevir (fullerenopolyaminocaproic acid sodium salt) 20 mg as active ingredient and ancillary substances such as propylene glycol 200 mg and balance: Vitepsol. This is an effective agent having no adverse influence on peripheral blood and body systems.
CC 63-6 (Pharmaceuticals)

L62 ANSWER 9 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 9
ACCESSION NUMBER: 2007:1061803 ZCAPLUS Full-text

DOCUMENT NUMBER: 147:330519
TITLE: A vaginal antimicrobial suppository
INVENTOR(S): Rasnetsov, Lev Davidovich; Shvartsman, Iakov Yudelevitch; Lyalina, Irina Konstantinovna
PATENT ASSIGNEE(S): Zakrytoe Aktsionernoe Obschestvo "Intelpharm", Russia
SOURCE: PCT Int. Appl., 17pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007105984	A1	20070920	WO 2007-RU25	20070124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RU 2318523	C2	20080310	RU 2006-107864	20060313
EE 200800057	A	20081015	EE 2008-57	20070124

PRIORITY APPLN. INFO.: RU 2006-107864 A 20060313
WO 2007-RU25 W 20070124

AB The invention relates to the chemical and pharmaceutical industry, in particular to producing a suppository antimicrobial agent which comprises iodine and can be used in clin. practice for treating inflammatory diseases of a female genital sphere. The inventive suppository antimicrobial agent contains iodine in the form of an active substance and a filler and is characterised in that the active substance is embodied in the form of an iodine-dimethyl-sulfoxide (DMSO) combination at a ratio of 1:(1-10) and comprises a liposol. base in the form of the filler, wherein the iodine content in the suppository ranges from 10 to 200 mg. The suppositories exhibit an extended antimicrobial spectrum.

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 10 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 10
ACCESSION NUMBER: 2005:991188 ZCAPLUS Full-text
DOCUMENT NUMBER: 143:269083
TITLE: Method of production of C60 and C70 fullerenes and reactor for production of fullerene black
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.; Karnatsevich, V. L.; Kirillov, A. I.; Kaverin, B. S.; Lopatin, M. A.
PATENT ASSIGNEE(S): Zakrytoe Aktsionernoe Obshchestvo "Fulleren-Tsentr", Russia; Institut Metalloorganicheskoi Khimii im. G. A. Razuvaeva RAN
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent

LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2259942	C2	20050910	RU 2003-127108	20030909

PRIORITY APPLN. INFO.: RU 2003-127108 20030909

AB In pharmacol. fields, the method includes evacuation of a hermetic chamber, then filling it with helium. A voltage is supplied to a cathode and anode located resp. in a cathode lead-in and anode lead-in. The cathode lead-in moves in a longitudinal direction and the anode lead-in is immovable. After anode burning, its replacement is performed automatically from a rod loader. The anode and cathode are enclosed in metal casing with open ends, mounted coaxially relative to the electrodes. The casing is turnable and its longitudinal axis coincides with the axis of the upper flange and lower flange. The upper flange is provided with axle with piston for forcing fullerene-containing black to a storage chamber mounted on the lower flange. The black thus obtained is subjected to treatment in a Soxlet apparatus with aromatic solvent-toluene. To this end, use is made of excessive amts. of black relative to saturated solution of mixture of fullerenes in toluene. The extract containing ≤95% C60 settles on the hot bottom of apparatus The solution above sediment is enriched with C70 ≤70%. Fullerence C60 and C70 are separated independently and in parallel in chromatog. columns using activated charcoal as immovable phase. Toluene or chlorobenzene is used as movable phase. The target product is crystallized and is addnl. cleaned by re-crystallization or sublimation in vacuum, thus obtaining C60 at purity 99.9% and C70 at purity 99.5%. The result is enhanced reliability and facilitated method.

IC ICM C01B031-02
ICS B01D011-02; B01D015-08
CC 49-1 (Industrial Inorganic Chemicals)
Section cross-reference(s): 76
ST fullerene black prodn reactor
IT Charcoal
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(activated; production of C60 and C70 fullerenes and reactor for production of fullerene black)
IT Liquid chromatography
Reactors
Sacrificial anodes
Solvent extraction
(production of C60 and C70 fullerenes and reactor for production of fullerene black)
IT Carbon black, preparation
RL: PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)
(production of C60 and C70 fullerenes and reactor for production of fullerene black)
IT 7440-59-7, Helium, processes
RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(production of C60 and C70 fullerenes and reactor for production of fullerene black)
IT 108-88-3, Toluene, uses 108-90-7, Chlorobenzene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(production of C60 and C70 fullerenes and reactor for production of fullerene black)
IT 7440-44-0P, Carbon, preparation 99685-96-8P, C60 Fullerene

115383-22-7P, C70 Fullerene
RL: PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)
(production of C60 and C70 fullerenes and reactor for production of fullerene black)

L62 ANSWER 11 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 11
ACCESSION NUMBER: 2005:498437 ZCAPLUS Full-text
DOCUMENT NUMBER: 143:45328
TITLE: Polyhexamethyleneguanidine-containing noncorrosive disinfecting detergent compositions
INVENTOR(S): Rasnetsov, L. D.; Gaiduchenya, G. M.; Shvartsman, Ya. Yu.; Kozhevnikov, V. G.; Filonov, V. P.; Gaiduchenya, A. V.; Rasnetsova, B. E.
PATENT ASSIGNEE(S): Zakrytoe Aktsionernoe Obshchestvo "Desko", Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2253669	C1	20050610	RU 2003-136055	20031215

PRIORITY APPLN. INFO.: RU 2003-136055 20031215

AB A disinfecting detergent composition comprises a mixture of a nonionic surfactant (6.8-11.7), anionic surfactant (3.1-5.8), and cationic surfactant (0.5-1.0%), an active cleaning component (3.0-9.8), a polyhexamethyleneguanidine derivative as a disinfectant (0.5-6.0), and a solvent (to 100%), the active cleaning component being a mixture of sodium CM-cellulose, and sodium salts of phosphoric acid, sulfuric acid, and silicic acid, and the cationic surfactant being a quaternary ammonium compound Preferably, the nonionic surfactant is a mixture of Neonol, Syntanol, and wetting agent DB, the cationic surfactant is alkyldimethylbenzylammonium chloride or didecyldimethylammonium chloride, and the anionic surfactant is a mixture of Sulfanol and fatty alc. sulfates. The detergent compns. have improved anticorrosive properties, increased antibacterial and fungicidal activity, and can be used for cleaning of various surfaces (e.g. metal, glass) in medicine, food industry, engineering, and household.

IC ICM C11D001-86
ICS C11D001-62; C11D003-04; C11D003-48
CC 46-6 (Surface Active Agents and Detergents)
Section cross-reference(s): 63

L62 ANSWER 12 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 12
ACCESSION NUMBER: 2003:826903 ZCAPLUS Full-text
DOCUMENT NUMBER: 140:113683
TITLE: Method for preparing water-soluble amino acid derivatives of fullerene
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.; Rasnetsova, B. E.; Karnatsevich, V. L.; Suvorova, O. N.; Kutyreva, V. V.; Shchupak, E. A.; Bazyakina, N. L.; Makarov, S. G.
PATENT ASSIGNEE(S): Zakrytoe Aktsionernoe Obshchestvo "Desko", Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2213049	C1	20030927	RU 2002-118286	20020708

PRIORITY APPLN. INFO.: RU 2002-118286 20020708

AB The organic chemical, chemical technol. The invention relates to the improved method for preparing water-soluble amino acids derivs. of fullerene that can be used in pharmacol. and microbiol. Invention describes method for preparing water-soluble amino acid derivs. of fullerene of the general formula (I): HC60NH(CH2)nCOO-Kt+ wherein C60 is a fullerene ring; Kt+ is hydrogen atom, ammonium or alkaline metal cation; n = 1, 3, 5. Method involves interaction of fullerene with amino acid salt at heating and the following isolation of the end product. Compound of the general formula (II): is used as amino acid salt wherein R is CqH2q+1; m = 3, 4; q = 2-5; Y- is chemical element taken among (Va) or (VIa) groups of Mendeleyev's periodic system. Then compound of the general formula (III): is prepared wherein R, Y, n, m have values given above that is subjected for the following reactions: in the case for preparing the end product of the general formula (I) wherein Kt+ is hydrogen atom method involves effect with acid solution and if Kt+ is ammonium or alkaline metal cation method involves effect with corresponding salt. Proposed method does not require the special equipment and can be carried out using the conventional chemical equipment that results to the simplified technol. process and reduced cost of the end product.

IC ICM C01B031-02
ICS C07C229-06; C07F009-10; C07F009-66; C07F009-90; C07F009-94; C07F011-00

CC 49-8 (Industrial Inorganic Chemicals)

ST water soluble amino acid deriv fullerene prepn

IT Amino acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(method for preparing water-soluble amino acid derivs. of fullerene)

IT Amino acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(salts; method for preparing water-soluble amino acid derivs. of fullerene)

IT 99685-96-8DP, Fullerene, amino acid derivs.
RL: IMF (Industrial manufacture); PREP (Preparation)
(method for preparing water-soluble amino acid derivs. of fullerene)

L62 ANSWER 13 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 13

ACCESSION NUMBER: 2003:826902 ZCAPLUS Full-text
DOCUMENT NUMBER: 140:96298
TITLE: Method for preparing water-soluble salts of amino acid derivatives of fullerene
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.; Rasnetsova, B. E.; Karnatsevich, V. L.; Suvorova, O. N.; Kutyreva, V. V.; Shchupak, E. A.; Bazyakina, N. L.; Makarov, S. G.
PATENT ASSIGNEE(S): Zakrytoe Aktsionernoe Obshchestvo "Desko", Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

RU 2213048	C1	20030927	RU 2002-118282	20020708

PRIORITY APPLN. INFO.: RU 2002-118282 20020708

AB The invention relates to the improved method for preparing water- soluble salts of amino acid derivs. of fullerene that can be used in medicine, pharmacol. and microbiol. Invention describes method for preparing water-soluble salts of amino acid derivs. of fullerene of the general formula HC60NH(CH2)nCOOM wherein C60 is a fullerene ring; M is alkaline metal; n = 1, 3, 5. The method involves interaction of fullerene with amino acid salt in an organic solvent medium at heating and the following isolation of the end product. Interaction reaction is carried out in the presence of low-mol. polyalkylene oxide with mol. mass 150-400 Da. The invention provides reduced process time, and reduced manufacturing cost due to use of inexpensive raw materials.

IC ICM C01B031-02
ICS C07C229-06

CC 49-5 (Industrial Inorganic Chemicals)

ST alkali metal amino acid salt fullerene deriv manuf

IT IR spectra
(method for preparing water-soluble salts of amino acid derivs. of fullerene)

IT Polyoxyalkylenes, processes
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(method for preparing water-soluble salts of amino acid derivs. of fullerene)

IT Amino acids, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(salts, alkali metal fullerene derivs.; method for preparing water-soluble salts of amino acid derivs. of fullerene)

IT 99685-96-8P, Fullerene
RL: IMF (Industrial manufacture); PREP (Preparation)
(alkali metal amino acid salt derivs.; method for preparing water-soluble salts of amino acid derivs. of fullerene)

IT 99685-96-8DP, Fullerene, alkali metal amino acid salt derivs. 645420-16-2P 645420-18-4P 645420-20-8P 645420-22-0P 645420-23-1P 645420-24-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(method for preparing water-soluble salts of amino acid derivs. of fullerene)

IT 108-88-3, Toluene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(method for preparing water-soluble salts of amino acid derivs. of fullerene)

IT 6610-05-5, Sodium γ-aminobutyrate 48047-10-5, Potassium ε-aminocaproate
RL: RCT (Reactant); RACT (Reactant or reagent)
(method for preparing water-soluble salts of amino acid derivs. of fullerene)

L62 ANSWER 14 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER:	2008:1519339 ZCAPLUS Full-text
TITLE:	Device for obtaining fullerene containing soot
INVENTOR(S):	Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Karnatsevich, V. L.; Kirillov, A. I.; Kaverin, B. S.
PATENT ASSIGNEE(S):	ZAO "Fulleren-Tsentr", Russia
SOURCE:	Russ., 7pp. CODEN: RUXXE7
DOCUMENT TYPE:	Patent
LANGUAGE:	Russian

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2341452	C1	20081220	RU 2007-113546	20070411

PRIORITY APPLN. INFO.: RU 2007-113546 20070411

AB FIELD: chemical; electricity.SUBSTANCE: proposed device contains a cold airtight chamber filled with helium. On opposite walls of the camera casing 1 with the help of ports 4 and 5 anode current leads 6 and 7 are installed, in which electrodes 8 and 9 in the form of rods are placed in line with each other. Current leads 6 and 7 are connected to different power sources. Between rods 8 and 9 is placed a graphite electrode in the form of disk 10 with the formation of a discharge gap between them. Disk 10 is installed in a fixed position on the cathode current 11, which is placed on the upper flange of camera 2 and is connected to the elec. motor 12 for ensuring the possibility of the rotation of disk 10 on a plane parallel to the plane of flange 2. Burnt rods 8 and 9 are installed with the capability of moving in the discharge gap zone. On the outside of ports 4 and 5 are connected vacuum loaders of rods 13 each of which consists of cover 14, connected to its own port 4 and 5, vibration-layer 15, which contains the reserve rods, supply device, made, for example in the form of a closed chain for supply 16 tooth-pushers 17 with the capability of catching and moving rods 8 and 9, and intermittent drive 18. Cathode current lead 11 is supplied with knives 19 to prevent the possibility of outgrowths forming on disk 10. The lower flange 3 is connected to the soot accumulator 20.EFFECT: doubling the productivity of the device with continuous submission of the burnt rods to the zone of the discharge gap due to the organization of two arc processes in one chamber.1 dwg.

CC 49 (Industrial Inorganic Chemicals)

L62 ANSWER 15 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:690830 ZCAPLUS Full-text
TITLE: Synthesis and properties of water-soluble fullerene derivatives
AUTHOR(S): Suvorova, O. N.; Kutureva, V. V.; Baziakina, N. L.; Karnatsevich, V. L.; Schupak, E. A.; Rasnetsov, L. D.; Makarov, S. G.
CORPORATE SOURCE: Razuvaev Institute of Organometallic Chemistry of Russian Academy of Sciences, Nizhnii Novgorod, 603900, Russia
SOURCE: Hydrogen Materials Science and Chemistry of Carbon Nanomaterials, International Conference, 9th, Sevastopol, Ukraine, Sept. 5-11, 2005 (2005), 498-501. Editor(s): Schur, D. V.; Zaginaichenko, S. Yu.; Veziroglu, T. Nejat. Association for Hydrogen Energy in Ukraine: Kiev, Ukraine.
CODEN: 69KTNL
DOCUMENT TYPE: Conference
LANGUAGE: English/Russian

AB The processes of fullerene amino acids preparation by the direct addition of amino acid derivs. to C60Ψ were investigated. Some technol. aspects of this reaction were studied using different phase-transfer catalysts, and new methods of fullerene amino acids production with quant. yields and their purification were suggested. Water-soluble derivs. were obtained using the method of 1,3-dipolar cycloaddn. of azomethine ylides via the decarboxilation of immonium salt derived from the condensation of sarcosine with Boc-protected amino ketone. The results show that both methods of fullerene functionalization can be successfully used for preparation of water-soluble fullerene derivs.

CC 52 (Electrochemical, Radiational, and Thermal Energy Technology)
ST water soluble fullerene deriv optical property
IT INDEXING IN PROGRESS
IT IR spectroscopy
(synthesis and properties of water-soluble fullerene derivs.)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L62 ANSWER 16 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:690800 ZCAPLUS Full-text
TITLE: X-ray rapid analysis of fullerene content in arc soot
AUTHOR(S): Kirillov, A. I.; Karnatsevich, V. L.; Rasnetsov, L. D.
CORPORATE SOURCE: Institute of Organo-metallic Chemistry of RAS, Nizhny Novgorod, 603095, Russia
SOURCE: Hydrogen Materials Science and Chemistry of Carbon Nanomaterials, International Conference, 9th, Sevastopol, Ukraine, Sept. 5-11, 2005 (2005), 418-421. Editor(s): Schur, D. V.; Zaginaichenko, S. Yu.; Veziroglu, T. Nejat. Association for Hydrogen Energy in Ukraine: Kiev, Ukraine.
CODEN: 69KTNL
DOCUMENT TYPE: Conference
LANGUAGE: English/Russian
AB A method for the quant. X-ray anal. of fullerene-containing soot is developed. In the method, the samples are taken from different parts of the reactor with various content of fullerene. The concentration is determined by weighing the residue from Sokslet container. The measurement is carried out on (computerized) DRON-3M diffractometer with Cu-Kα radiation in step mode at narrow angle intervals under the peaks of fullerene and carbon. The merits of the method include: (1) no need to weigh a sample since only the total intensity of diffracted beam depends upon quantity of substance in the sample (d. of cell packing) as the ratio of intensities, being proportional to phase concns., remains constant, and (2) the time of anal. with subsequent processing of the result is about one hour which is by an order of magnitude less than in the above-mentioned techniques.
CC 52 (Electrochemical, Radiational, and Thermal Energy Technology)
ST arc soot fullerene X ray analysis
IT INDEXING IN PROGRESS
IT X-ray spectroscopy
(X-ray rapid anal. of fullerene content in arc soot)

L62 ANSWER 17 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:746375 ZCAPLUS Full-text
DOCUMENT NUMBER: 126:24049
ORIGINAL REFERENCE NO.: 126:4831a,4834a
TITLE: Sorbent for radionuclide extraction
INVENTOR(S): Rasnetsov, Lev D.; Dyachkovskij, Fridrikh S.; Tuzova, Alla M.; Rasnetsova, Betti E.; Fadeev, Vadim V.; Kanakova, Olga A.; Zubkov, Aleksandr M.
PATENT ASSIGNEE(S): Aktsionernoe Obshchestvo Zakrytogo Tipa Aktsionernoe Predpriyatie "ring" Ltd, Russia
SOURCE: Russ. From: Izobreteniya 1996, (16), 168-170.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

RU 2061540 C1 19960610 RU 1992-5059384 19920821
PRIORITY APPLN. INFO.: SU 1992-5059384 A 19920821
AB Title only translated.
IC ICM B01J020-00
ICS G21F009-12
CC 71-8 (Nuclear Technology)

L62 ANSWER 18 OF 19 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:147954 ZCAPLUS Full-text
DOCUMENT NUMBER: 124:192809
ORIGINAL REFERENCE NO.: 124:35339a,35342a
TITLE: Method for determining strontium radionuclides
INVENTOR(S): Spivakov, Boris Ya.; Petrukhin, Oleg M.; Rasnetsov, Lev D.; Malofeeva, Galina I.; Danilova, Tatyana V.; Tuzova, Alla M.; Rasnetsova, Betti E.
PATENT ASSIGNEE(S): Aktsionernoe Obshchestvo Zakrytogo Tipa Aktsionernoe Predpriyatie "Ring" Ltd., Russia
SOURCE: Russ. From: Izobreteniya 1995, (17), 235.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2037894	C1	19950619	RU 1992-5056410	19920727

PRIORITY APPLN. INFO.: SU 1992-5056410 A 19920727
AB Title only translated.
IC ICM G21G004-00
ICS G01N030-06
CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 71

L62 ANSWER 19 OF 19 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN
ACCESSION NUMBER: 2004-735111 [72] WPIX Full-text
DOC. NO. CPI: C2004-258526 [72]
TITLE: Agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections
DERWENT CLASS: B05
INVENTOR: LYALINA I K ; RASNETSOV L D; RASNETSOVA B E; SHVARTSAM I Y; SHVARTSMAN I Y; SHVARTSMAN L Y
PATENT ASSIGNEE: (DESK-R) DESKO STOCK CO; (LYAL-I) LYALINA I K; (RASN-I) RASNETSOV L D; (RASN-I) RASNETSOVA B E; (SHVA-I) SHVARTSMAN I Y; (RASN-I) RASNETSOV L
COUNTRY COUNT: 107

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
RU 2236852	C1	20040927	(200472)*	RU	0[0]	
WO 2004112804	A1	20041229	(200504)	RU		
EP 1645279	A1	20060412	(200626)	EN		
US 20060122276	A1	20060608	(200639)	EN		
BR 2004011679	A	20060829	(200659)	PT		

AU	2004249090	A1	20041229 (200660)	EN
KR	2006017887	A	20060227 (200660)	KO
CN	1819834	A	20060816 (200682)	ZH
JP	2007522082	W	20070809 (200754)	JA 32
IN	2006DN00326	P1	20070817 (200780)	EN

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
RU 2236852 C1		RU 2003-118500	20030623
AU 2004249090 A1		AU 2004-249090	20040531
BR 2004011679 A		BR 2004-11679	20040531
CN 1819834 A		CN 2004-80017167	20040531
EP 1645279 A1		EP 2004-748919	20040531
WO 2004112804 A1		WO 2004-RU208	20040531
EP 1645279 A1		WO 2004-RU208	20040531
US 20060122276 A1		WO 2004-RU208	20040531
BR 2004011679 A		WO 2004-RU208	20040531
KR 2006017887 A		WO 2004-RU208	20040531
JP 2007522082 W		WO 2004-RU208	20040531
US 20060122276 A1		US 2005-559681	20051206
KR 2006017887 A		KR 2005-724813	20051223
JP 2007522082 W		JP 2006-517009	20040531
IN 2006DN00326 P1		WO 2004-RU208	20040531
IN 2006DN00326 P1		IN 2006-DN326	20060118

FILING DETAILS:

PATENT NO	KIND		PATENT NO	
EP 1645279	A1	Based on	WO 2004112804	A
BR 2004011679	A	Based on	WO 2004112804	A
KR 2006017887	A	Based on	WO 2004112804	A
AU 2004249090	A1	Based on	WO 2004112804	A
JP 2007522082	W	Based on	WO 2004112804	A

PRIORITY APPLN. INFO: RU 2003-118500 20030623
INT. PATENT CLASSIF.:

MAIN:	A61K033-00
SECONDARY:	A61K031-197; A61K031-785; A61K038-55; A61P031-18
IPC ORIGINAL:	A61K0031-185 [I,C]; A61K0031-185 [I,C]; A61K0031-185 [I,C]; A61K0031-195 [I,A]; A61K0031-197 [I,A]; A61K0031-197 [I,A]; A61K0031-197 [I,A]; A61K0031-198 [I,A]; A61K0031-21 [I,C]; A61K0031-225 [I,A]; A61K0031-66 [I,A]; A61K0031-66 [I,C]; A61K0031-74 [I,C]; A61K0031-74 [I,C]; A61K0031-74 [I,C]; A61K0031-785 [I,A]; A61K0031-785 [I,A]; A61K0031-785 [I,A]; A61K0033-00 [I,A]; A61K0033-00 [I,A]; A61K0033-00 [I,C]; A61K0038-55 [I,A]; A61K0038-55 [I,A]; A61K0038-55 [I,A]; A61K0038-55 [I,C]; A61P0001-00 [I,C]; A61P0001-16 [I,A]; A61P0031-00 [I,C]; A61P0031-00 [I,C]; A61P0031-00 [I,C]; A61P0031-12 [I,A]; A61P0031-18 [I,A]; A61P0031-18 [I,A]; A61P0031-18 [I,A]; A61P0031-22 [I,A]
IPC RECLASSIF.:	A61K0031-185 [I,C]; A61K0031-197 [I,A]; A61K0031-74 [I,C]; A61K0031-785 [I,A]; A61P0031-00 [I,C]; A61P0031-18 [I,A]
ECLA:	A61K0031-197; A61K0031-785
USCLASS NCLM:	514/567.000
NCLS:	977/738.000

JAP. PATENT CLASSIF.:
MAIN/SEC.: A61K0031-198; A61P0001-16; A61P0031-12; A61P0031-18; A61P0031-22
FTERM CLASSIF.: 4C201; 4C206; 4C206/AA01; 4C206/AA02; 4C206/FA53; 4C206/KA08; 4C206/MA04; 4C206/MA37; 4C206/MA51; 4C206/MA55; 4C206/NA14; 4C206/ZA75; 4C206/ZB33; 4C206/ZC55

BASIC ABSTRACT:

RU 2236852 C1 UPAB: 20050707

NOVELTY - Invention relates to the development of agent for inhibition of reproduction of enveloped viruses. Invention proposes the group of inventions combined by the general inventive project involving a method for preparing compounds, development of pharmaceutical compositions and methods for treatment using their, agent based on fullerene polycarboxylic anions for inhibition of activity of enveloped viruses in treatment of diseases caused by these viruses. Choice of such quantitative ratios of components and conditions for carrying out the reaction provide preparing products of poly-addition. In carrying out synthesis amount of amino acid has to exceed amount of fullerene by more 50 times. Invention relates also to a method for inhibition of reproduction of enveloped viruses in treatment of diseases caused by HIV/AIDS, herpes infections, viral hepatitis C. Invention provides preparing product that has unlimited solubility in water, necessary bioavailability, high effectiveness of effect on infected cells and low toxicity. The content of basic substance in the end product is 87%, not less. Process shows technological effectiveness and can be used in pharmaceutical industry.

USE - Virology, pharmaceutical industry, pharmacy.

ADVANTAGE - Improved preparing method, improved inhibiting method, valuable medicinal properties of agent.5 cl MANUAL CODE: CPI: B10-B02; B10-C02; B10-J02; B14-A02A3; B14-A02A7; B14-A02B1; B14-G01B

IN LYALINA I K ; RASNETSOV L D; RASNETSOVA B E; SHVARTSAM I Y; SHVARTSMAN I Y; SHVARTSMAN L Y

NOV NOVELTY - Invention relates to the development of agent for inhibition of reproduction of enveloped viruses. Invention proposes the group of inventions combined by the general inventive project involving a method for preparing compounds, development of pharmaceutical compositions and methods for treatment using their, agent based on fullerene polycarboxylic anions for inhibition of activity of enveloped viruses in treatment of diseases caused by these viruses. Choice of such quantitative ratios of components and conditions for carrying out the reaction provide preparing products of poly-addition. In carrying out synthesis amount of amino acid has to exceed amount of fullerene by more 50 times. Invention relates also to a method for inhibition of reproduction of enveloped viruses in treatment of diseases caused by HIV/AIDS, herpes infections, viral hepatitis C. Invention provides preparing product that has unlimited solubility in water, necessary bioavailability, high effectiveness of effect on infected cells and low toxicity. The content of basic substance in the end product is 87%, not less. Process shows technological effectiveness and can be used in pharmaceutical industry.

```
=> file registry
FILE 'REGISTRY' ENTERED AT 16:13:36 ON 02 JAN 2009
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STRUCTURE FILE UPDATES:    1 JAN 2009  HIGHEST RN 1092443-48-5
DICTIONARY FILE UPDATES:   1 JAN 2009  HIGHEST RN 1092443-48-5

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predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

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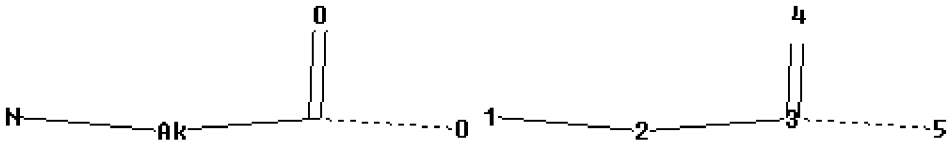


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1  2  3  4  5
chain bonds :
1-2  2-3  3-4  3-5
exact/norm bonds :
3-4  3-5
exact bonds :
1-2  2-3


Connectivity :
2:2 E exact RC ring/chain
Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS
Generic attributes :
2:
Saturation             : Saturated



Uploading L19.str
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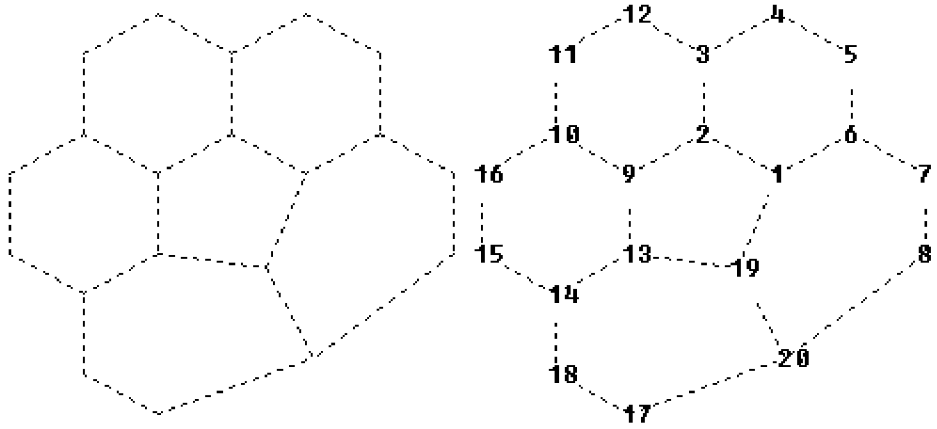
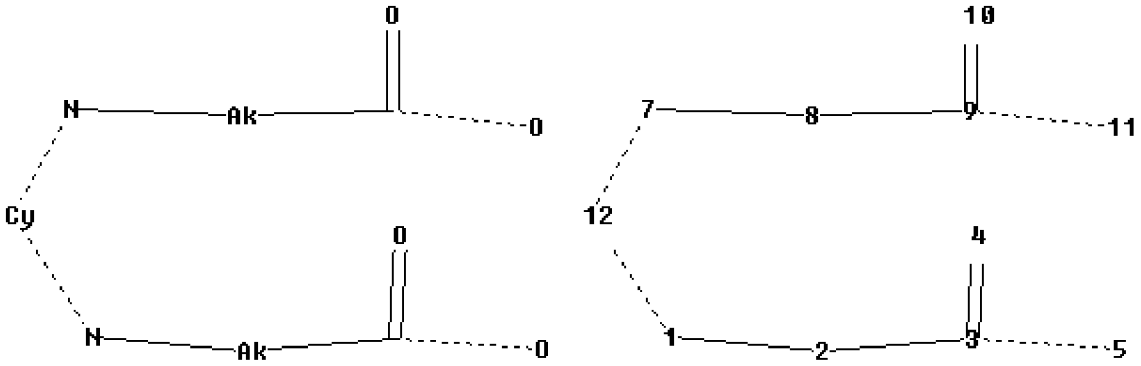


ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
ring bonds :
1-2 1-6 1-19 2-3 2-9 3-4 3-12 4-5 5-6 6-7 7-8 8-20 9-10 9-13 10-11
10-16 11-12 13-14 13-19 14-15 14-18 15-16 17-18 17-20 19-20
exact/norm bonds :
1-2 1-6 1-19 2-3 2-9 3-4 3-12 4-5 5-6 6-7 7-8 8-20 9-10 9-13 10-11
10-16 11-12 13-14 13-19 14-15 14-18 15-16 17-18 17-20 19-20

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom

Uploading L39.str



chain nodes :
1 2 3 4 5 7 8 9 10 11 12
chain bonds :
1-2 1-12 2-3 3-4 3-5 7-8 7-12 8-9 9-10 9-11
exact/norm bonds :
1-12 3-4 3-5 7-8 7-12 8-9 9-10 9-11
exact bonds :
1-2 2-3

Connectivity :

```
2:2 E exact RC ring/chain
Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS  7:CLASS  8:CLASS  9:CLASS  10:CLASS
11:CLASS  12:Atom
Generic attributes :
2:
Saturation             : Saturated

Element Count :
Node 12: Limited
    C,C55
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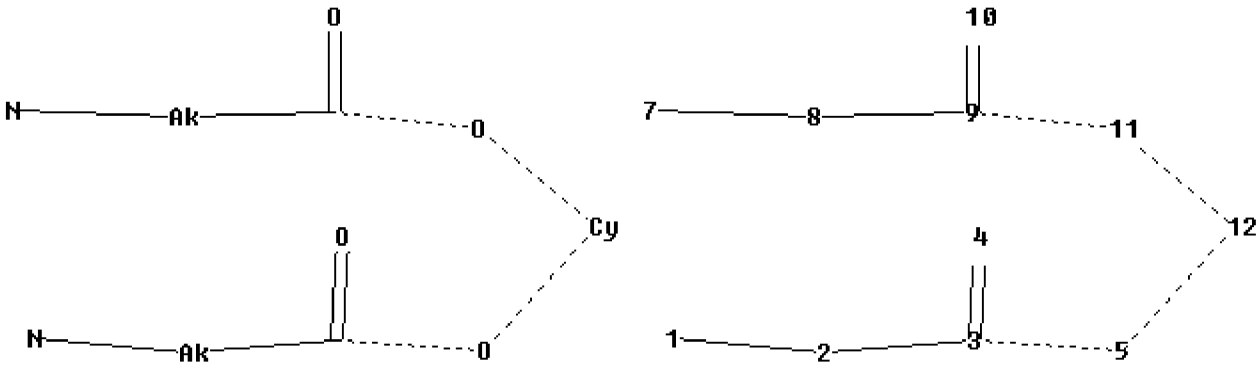


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chain nodes :
1  2  3  4  5  7  8  9  10  11  12
chain bonds :
1-2  2-3  3-4  3-5  5-12  7-8  8-9  9-10  9-11  11-12
exact/norm bonds :
3-4  3-5  5-12  7-8  8-9  9-10  9-11  11-12
exact bonds :
1-2  2-3


Connectivity :
2:2 E exact RC ring/chain
Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS  7:CLASS  8:CLASS  9:CLASS  10:CLASS
11:CLASS  12:Atom
Generic attributes :
2:
Saturation             : Saturated

Element Count :
Node 12: Limited
    C,C55
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=> file zcaplus
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FILE 'ZCAPLUS' ENTERED AT 16:13:40 ON 02 JAN 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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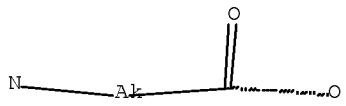
FILE COVERS 1907 - 2 Jan 2009 VOL 150 ISS 2
FILE LAST UPDATED: 1 Jan 2009 (20090101/ED)

ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

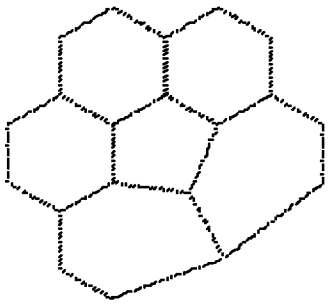
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate
substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'ZCAPLUS' FILE

=> d stat que L26
L18 STR



Structure attributes must be viewed using STN Express query preparation.
L19 STR



Structure attributes must be viewed using STN Express query preparation.
L21 260 SEA FILE=REGISTRY SSS FUL L18 AND L19

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L22           37 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L21 AND IDS/CI
L23           13 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L22 AND C60/CNS
L26            6 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L23


=> d stat que L43
L18              STR
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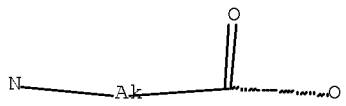


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Structure attributes must be viewed using STN Express query preparation.
L19              STR
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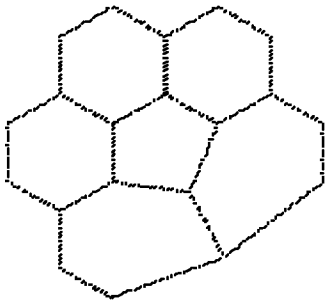

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Structure attributes must be viewed using STN Express query preparation.
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L39              STR
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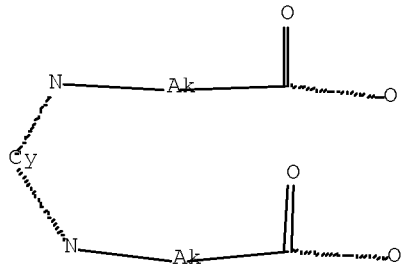


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Structure attributes must be viewed using STN Express query preparation.
L40              STR
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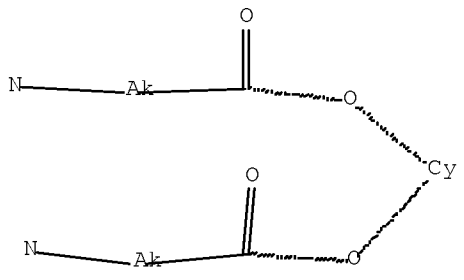


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Structure attributes must be viewed using STN Express query preparation.
L42          15 SEA FILE=REGISTRY SUB=L21 SSS FUL L39 OR L40
L43          15 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L42


=> s L26 or L43
L63          21 L26 OR L43

=> d stat que L9
L2            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  99685-96-8
L3         2246 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L2/D
L4          977 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L3 (L) PREP/RL
L5       207299 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  AMINO ACID?/CW
L6        15098 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L5 (L) RACT/RL
L7         4881 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L2 (L) RACT/RL
L8           30 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L6 AND L7
L9            2 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L4 AND L8


=> d stat que L12
L2            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  99685-96-8
L5       207299 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  AMINO ACID?/CW
L6        15098 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L5 (L) RACT/RL
L7         4881 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L2 (L) RACT/RL
L8           30 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L6 AND L7
L11      118009 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  ?DIAMINO?/BI OR
                 ?TRIAMINO?/BI OR DI AMINO?/BI OR ?TRI AMINO?/BI
L12           1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  L8 AND L11


=> s L26 or L43 or L9 or L12
L64          24 L26 OR L43 OR L9 OR L12

=> d ibib abs hitind hitstr L64 1-24

L64  ANSWER 1 OF 24  ZCAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:        2008:1152155  ZCAPLUS  Full-text
DOCUMENT NUMBER:         149:576255
TITLE:                   Two Ih-symmetry-breaking C60 isomers stabilized by
                         chlorination
AUTHOR(S):               Tan, Yuan-Zhi; Liao, Zhao-Jiang; Qian, Zhuo-Zhen;
                         Chen, Rui-Ting; Wu, Xin; Liang, Hua; Han, Xiao; Zhu,
                         Feng; Zhou, Sheng-Jun; Zheng, Zhiping; Lu, Xin; Xie,
                         Su-Yuan; Huang, Rong-Bin; Zheng, Lan-Sun
CORPORATE SOURCE:        State Key Laboratory for Physical Chemistry of Solid
```

Surfaces and Department of Chemistry, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, 361005, Peop. Rep. China
SOURCE: Nature Materials (2008), 7(10), 790-794
CODEN: NMAACR; ISSN: 1476-1122
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

AB One abiding surprise in fullerene science is that Ih-sym. buckminsterfullerene C60 (Ih-C60 or #1,812C60, the nomenclature specified by symmetry or by Fowler's spiral algorithm) remains the sole C60 species exptl. available. Setting it apart from the other 1,811 topol. isomers (isobuckminsterfullerenes) is its exclusive conformity with the isolated-pentagon rule, which states that stable fullerenes have isolated pentagons. Although gas-phase existence of isobuckminsterfullerenes has long been suspected, synthetic efforts have yet to yield successful results. Here, the authors report the realization of two isobuckminsterfullerenes by chlorination of the resp. C2v- and Cs-sym. C60 cages. These chlorinated species, #1,809C60Cl8 and #1,804C60Cl12, were isolated in exptl. useful yields. Structural characterization by crystallog. unambiguously established the unique pentagon-pentagon ring fusions. These distinct structural features are directly responsible for the regioselectivity observed in subsequent substitution of chlorines, and also render these unprecedented derivs. of C60 isomers important for resolving the long-standing puzzle of fullerene formation by the Stone-Wales transformation scheme.

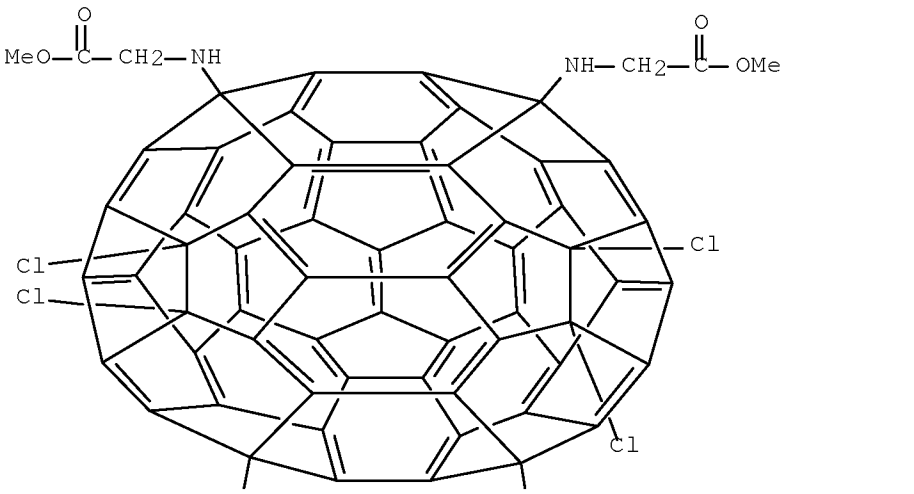
CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 22, 75, 78

IT 1082608-39-6P 1082608-40-9P 1082608-41-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and regioselective substitution reactions of chlorinated fullerene-C60-C2v)

IT 1082608-41-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and regioselective substitution reactions of chlorinated fullerene-C60-C2v)

RN 1082608-41-0 ZCAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



PAGE 2-A

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 2 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:418971 ZCAPLUS Full-text
DOCUMENT NUMBER: 147:188664
TITLE: Addition of bio-organic compounds on C60: A semi-empirical investigation of its reactivity with glycine
AUTHOR(S): Ben Messaouda, Mhamed; Moussa, Fathi; Tangour, Bahoueddine; Szwarc, Henri; Abderrabba, Manef
CORPORATE SOURCE: Faculte de Pharmacie de Chatenay-Malabry, Universite Paris XI, CNRS UMR 8612, Fr.
SOURCE: THEOCHEM (2007), 809(1-3), 153-159
CODEN: THEODJ; ISSN: 0166-1280
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The thermodn. stability of C60(Glycine)n (where n = 1-4) has been studied by means of AM1 calcns. to determine the positions where glycine mols. are preferentially added onto [60]fullerene mol. This study is meant to get some insight into the results of syntheses of C60 derivs. with biol. activities.

CC 22-4 (Physical Organic Chemistry)
Section cross-reference(s): 34

IT 944383-07-7
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(bis adduct, third glycine addition; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)

IT 944383-05-5
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(lowest energy bis adduct, third glycine addition; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)

IT 944383-10-2
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(lowest energy tetrakis adduct; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)

IT 944383-06-6
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(lowest energy tris adduct, fourth glycine addition; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)

IT 944383-09-9
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(tetrakis adduct; semiempirical study of the energetics and regiochem.

of addition reaction of C60 with glycine)

IT 944383-08-8

RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)

(tris adduct, fourth glycine addition; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)

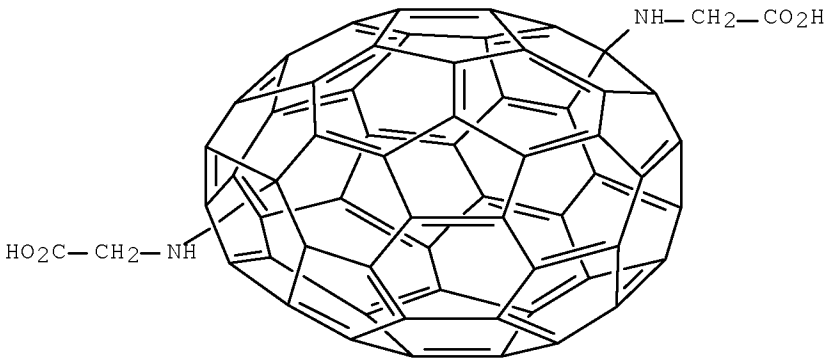
IT 944383-07-7

RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)

(bis adduct, third glycine addition; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)

RN 944383-07-7 ZCAPLUS

CN Glycine, N,N'-(9,59-dihydro[5,6]fullerene-C60-Ih-1,49-diyl)bis- (CA INDEX NAME)



IT 944383-05-5

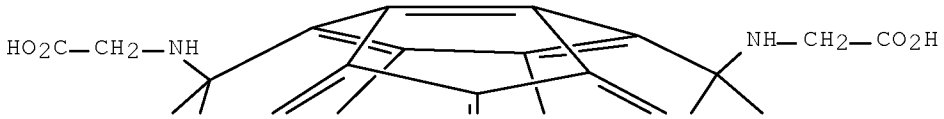
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)

(lowest energy bis adduct, third glycine addition; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)

RN 944383-05-5 ZCAPLUS

CN Glycine, N,N'-(9,32-dihydro[5,6]fullerene-C60-Ih-1,33-diyl)bis- (CA INDEX NAME)

PAGE 1-A



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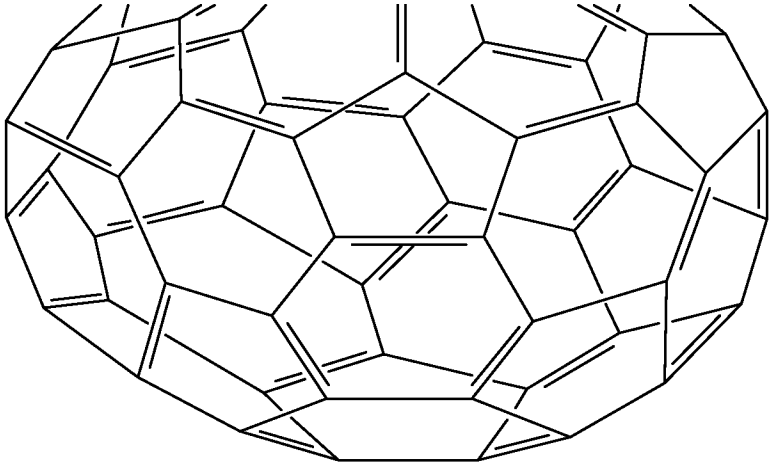


IT 944383-10-2
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(lowest energy tetrakis adduct; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)
RN 944383-10-2 ZCAPLUS
CN Glycine, N,N',N'',N'''-(9,13,39,46-tetrahydro[5,6]fullerene-C60-Ih-1,14,38,58-tetrayl)tetrakis- (CA INDEX NAME)

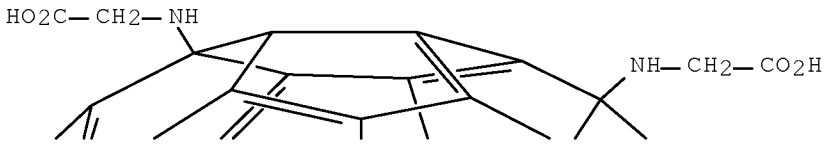
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 944383-06-6
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(lowest energy tris adduct, fourth glycine addition; semiempirical study

of the energetics and regiochem. of addition reaction of C60 with glycine)

RN 944383-06-6 ZCAPLUS

CN Glycine, N,N',N''-(13,39-dihydro[5,6]fullerene-C60-Ih-1,14,38(9H)-triyl)tris- (CA INDEX NAME)

PAGE 1-A



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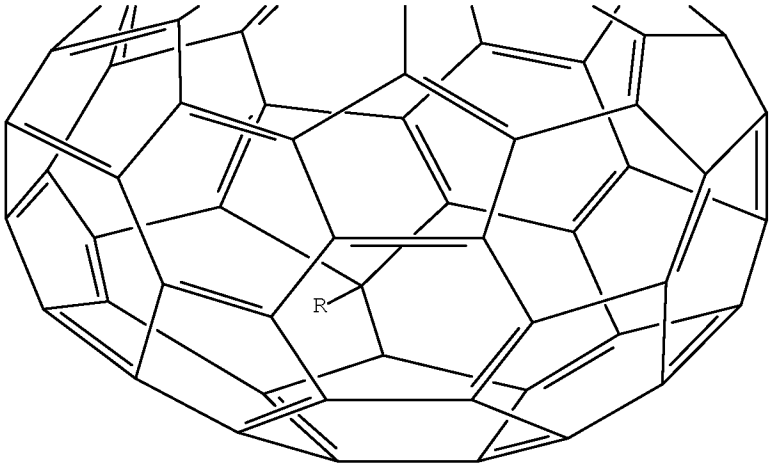
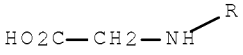
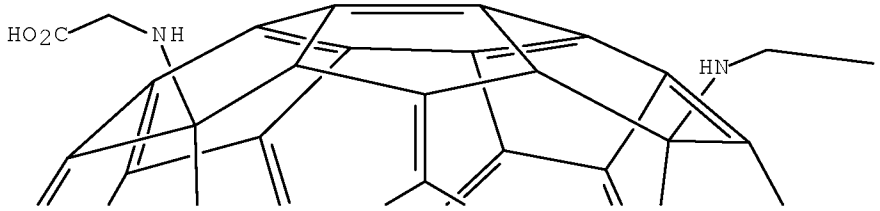


PAGE 3-A



IT 944383-09-9
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)
(tetrakis adduct; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)
RN 944383-09-9 ZCAPLUS
CN Glycine, N,N',N'',N'''-(9,16,25,49-tetrahydro[5,6]fullerene-C60-Ih-1,17,24,59-tetrayl)tetrakis- (CA INDEX NAME)

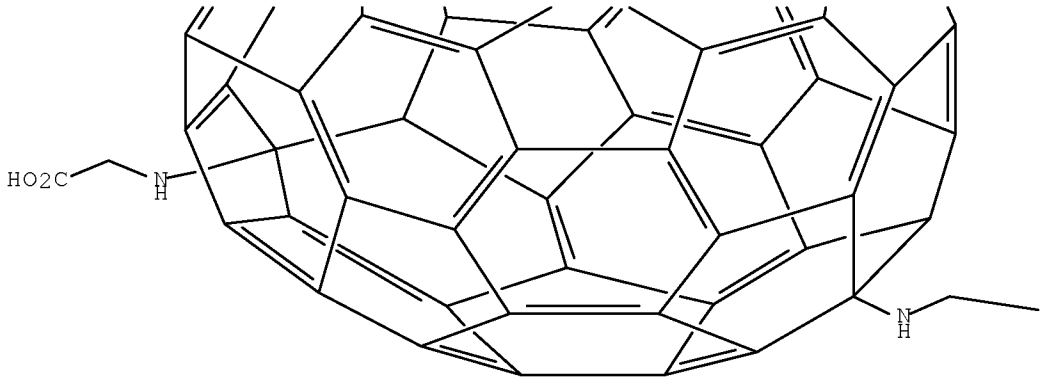
PAGE 1-A



PAGE 1-B

—CO2H

PAGE 2-A



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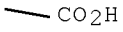
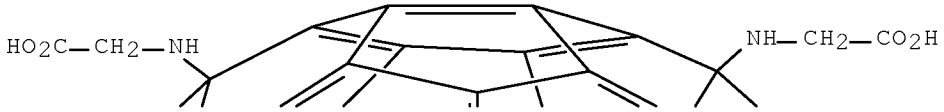


IT 944383-08-8
RL: FMU (Formation, unclassified); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(tris adduct, fourth glycine addition; semiempirical study of the energetics and regiochem. of addition reaction of C60 with glycine)
RN 944383-08-8 ZCAPLUS
CN Glycine, N,N',N''-(32,42-dihydro[5,6]fullerene-C60-Ih-1,33,41(9H)-triyl)tris- (CA INDEX NAME)

PAGE 1-A



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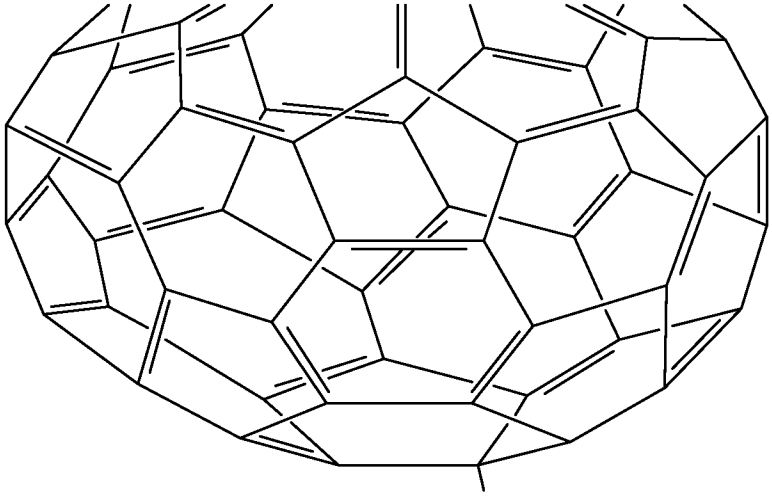


PAGE 3-A

NH—CH2—CO2H

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 3 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:365074 ZCAPLUS Full-text
DOCUMENT NUMBER: 147:10174
TITLE: Fullerene-derivatized amino acids: synthesis, characterization, antioxidant properties, and solid-phase peptide synthesis
AUTHOR(S): Yang, Jianzhong; Alemany, Lawrence B.; Driver, Jonathan; Hartgerink, Jeffrey D.; Barron, Andrew R.
CORPORATE SOURCE: Richard E. Smalley Institute for Nanoscale Science and Technology, The Institute of Biosciences and Bioengineering, and Center for Biological and Environmental Nanotechnology, Rice University, Houston, TX, 77005, USA
SOURCE: Chemistry--A European Journal (2007), 13(9), 2530-2545
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:10174

AB A series of [60]fullerene-substituted phenylalanine (Baa) and lysine derivs. have been prepared by the condensation of 1,2-(4'-oxocyclohexano)fullerene with the appropriately protected (4-amino)phenylalanine and lysine, resp. Conversion of the imine to the corresponding amine was achieved by di-acid catalyzed hydroboration. The reduction of the imine was not accompanied by hydroboration of the fullerene cage. The [70]fullerene phenylalanine derivative has also been prepared as have the di-amino acid derivs. The compds. were characterized by MALDI-TOF mass spectrometry, UV/Vis spectroscopy, and cyclic voltammetry. 1H and 13C NMR spectroscopy allowed the observation of diastereomers. Fullerene-substituted peptides may be synthesized on relatively large scale by solid-phase peptide synthesis. The presence of the C60-substituted amino acid in a peptide has a significant effect on the secondary structures and self-assembly properties of peptides as compared to the native peptide. The antioxidant assay of Baa and a Baa-derived anionic peptide was determined to be significantly more potent than Trolox.

CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22

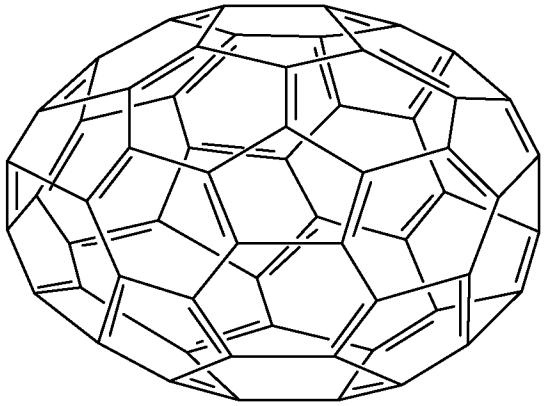
IT Amino acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(N-[(fluorenylmethoxy)carbonyl]; preparation and antioxidant properties of fullerene-derivatized amino acids via condensation of fullerene ketone with amino acids followed by reduction, and their use in solid-phase synthesis of fullerene-peptide conjugates)

IT Amino acids, preparation
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fullerene-derivatized; preparation and antioxidant properties of fullerene-derivatized amino acids via condensation of fullerene ketone with amino acids followed by reduction, and their use in solid-phase synthesis of fullerene-peptide conjugates)

IT 99685-96-8, C60 Fullerene
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(preparation and antioxidant properties of fullerene-derivatized amino acids via condensation of fullerene ketone with amino acids followed by reduction, and their use in solid-phase synthesis of fullerene-peptide conjugates)

IT 99685-96-8, C60 Fullerene
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(preparation and antioxidant properties of fullerene-derivatized amino acids

via condensation of fullerene ketone with amino acids followed by reduction, and their use in solid-phase synthesis of fullerene-peptide conjugates)
RN 99685-96-8 ZCAPLUS
CN [5,6]Fullerene-C60-Ih (CA INDEX NAME)



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 4 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:960378 ZCAPLUS Full-text
DOCUMENT NUMBER: 146:371879
TITLE: Gene delivery by aminofullerenes: structural requirements for efficient transfection
AUTHOR(S): Isobe, Hiroyuki; Nakanishi, Waka; Tomita, Naoki; Jinno, Shigeki; Okayama, Hiroto; Nakamura, Eiichi
CORPORATE SOURCE: Department of Chemistry and ERATO (JST), The University of Tokyo, Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan
SOURCE: Chemistry--An Asian Journal (2006), 1(1-2), 167-175
CODEN: CAAJBI; ISSN: 1861-4728
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 146:371879
AB A series of aminofullerenes that share a common structural motif have been synthesized and subjected to a systematic investigation of structure activity relationship regarding their ability for transient transfection and cytotoxicity. DNA-binding tests indicated that any water-soluble fullerene-bearing amino group would bind to double-stranded DNA. For these mols. to be effective transfection reagents, however, they require addnl. structural features. First, the mol. must be capable of producing submicrometersized fullerene/DNA aggregates that can be internalized into mammalian cells through endocytosis. Second, the mol. must be capable of releasing DNA as the aggregates are transferred into the cytoplasm. This can be achieved in at least two ways: by loss of the DNA-binding amino groups from the fullerene core, and by transformation of the amino groups to neutral groups such as amides. The screening expts. led us to identify the best reagent, a tetrapiperidinofullerene, that can be synthesized in two steps from fullerene, piperazine, and mol. oxygen, and that is more efficient at transfection than a commonly used lipid-based transfection reagent.

CC 1-3 (Pharmacology)

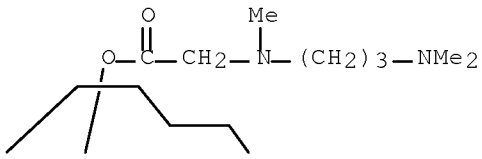
IT 71-44-3P, Spermine 110-60-1P, 1,4-Butanediamine 113-00-8P, Guanidine 124-20-9P, Spermidine 144487-61-6P 169477-76-3P 169477-77-4P 188923-48-0P 226420-73-1P 271785-61-6P 271785-65-0P 312773-17-4P 312773-18-5P 312773-19-6P 312773-20-9P 312773-21-0P 312773-22-1P 312773-23-2P 312773-24-3P 407617-27-0P 854752-05-9P 932025-64-4P 932025-65-5P 932025-66-6P 932025-67-7P 932025-68-8P 932025-69-9P 932025-70-2P 932025-71-3P
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gene delivery by aminofullerenes and structural requirements for efficient transfection)

IT 226420-73-1P 407617-27-0P
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gene delivery by aminofullerenes and structural requirements for efficient transfection)

RN 226420-73-1 ZCAPLUS

CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)

PAGE 1-A



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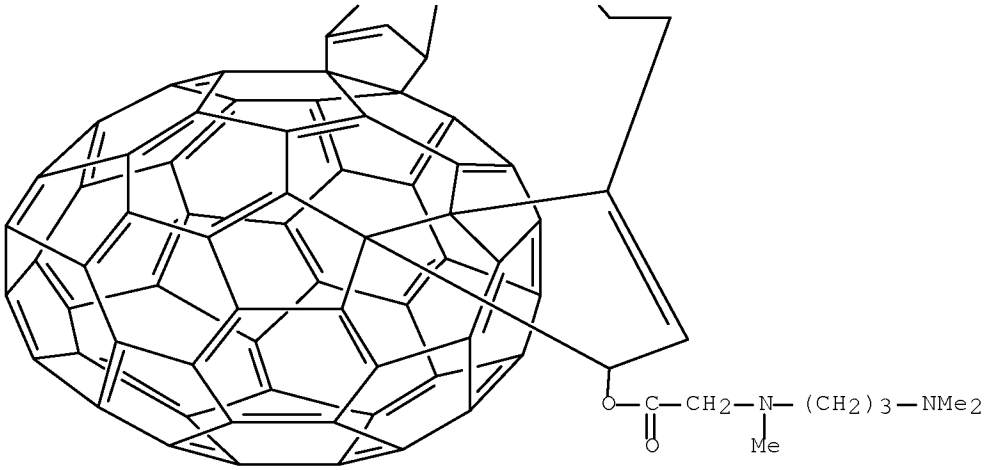
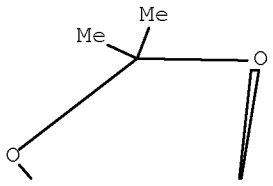


RN 407617-27-0 ZCAPLUS
CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, (1S,7'R,8'R,9S,9'R,13S,13'R,14S)-8',9'-dihydro-7',13'-dimethoxy-11',11'-dimethyl-5',5''-(ethano[4,5]-endo-[1,3]dioxoloethano)-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3,3''-diyl ester (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-C



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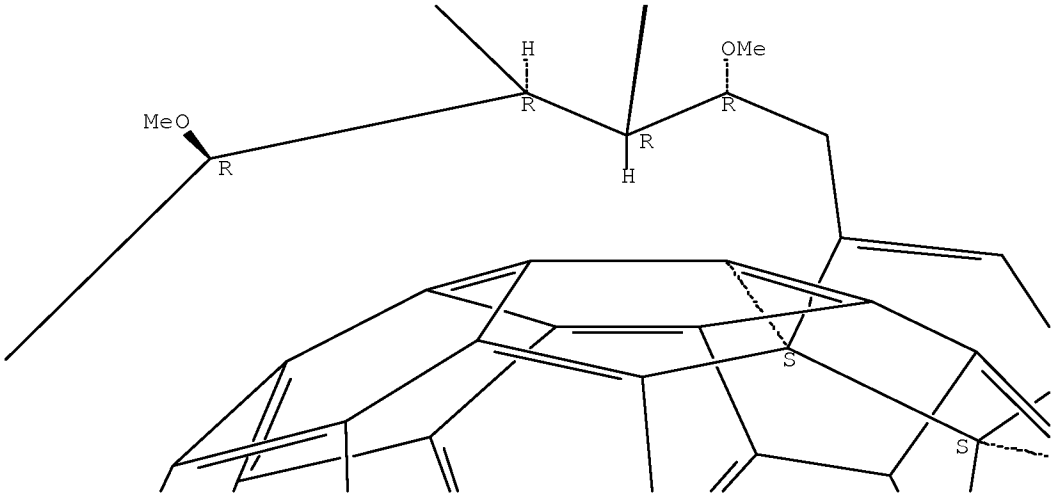
PAGE 2-C



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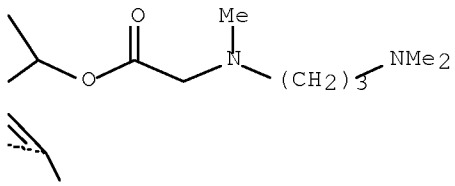

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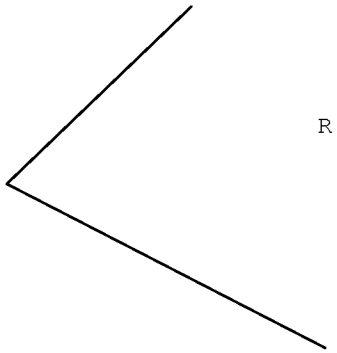

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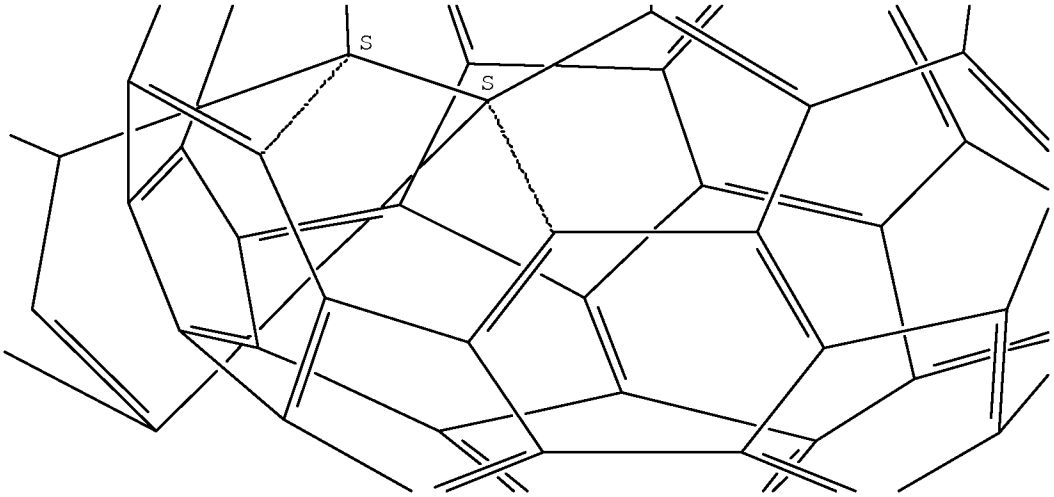

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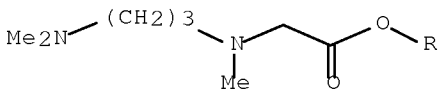


REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 5 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:162438 ZCAPLUS Full-text
DOCUMENT NUMBER: 145:455231
TITLE: Synthesis of fullerene-glycine derivative
AUTHOR(S): Jiang, Guichang; Zheng, Qixin
CORPORATE SOURCE: Department of Biology, Huazhong University of Science and Technology, Wuhan, 430074, Peop. Rep. China
SOURCE: Huagong Xinxing Cailiao (2005), 33(8), 24-26, 30
CODEN: HXCUA4; ISSN: 1006-3536
PUBLISHER: Huagong Xinxing Cailiao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
OTHER SOURCE(S): CASREACT 145:455231
AB A novel fullerene-glycine derivative was synthesized by means of organic chemical It is soluble in polar solvents such as water, DMSO and THF et al. The product was characterized by FTIR, 1H-NMR and TEM. TEM anal. showed that it presents an ideal spherical shape in water with an average particle diameter of about 18nm. The in vitro antitumor activity of the novel derivative has been tested and the result showed that the novel derivative exhibited better antitumor activity in vitro against bone tumor cells. The in vitro antitumor activity of the novel derivative were related to the derivative concentration, and were also dependent on the power of the light irradiation The antitumor mechanism of the derivative was studied.
CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1
IT 645420-16-2P, N-([5,6]Fulleren-C60-yl)glycine monosodium salt
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of N-([5,6]fulleren-C60-yl)glycine sodium salt and study of its
activity as anticancer agent)
IT 645420-16-2P, N-([5,6]Fulleren-C60-yl)glycine monosodium salt
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of N-([5,6]fulleren-C60-yl)glycine sodium salt and study of its
activity as anticancer agent)
RN 645420-16-2 ZCAPLUS
CN Glycine, N-[5,6]fulleren-C60-Ih-1(?H)-yl-, monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 645420-15-1
CMF C62 H63 N O2

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L64 ANSWER 6 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1298795 ZCAPLUS Full-text

DOCUMENT NUMBER: 144:260374
TITLE: Nonviral Gene Delivery by Tetraamino Fullerene
AUTHOR(S): Isobe, Hiroyuki; Nakanishi, Waka; Tomita, Naoki; Jinno, Shigeki; Okayama, Hiroto; Nakamura, Eiichi
CORPORATE SOURCE: Department of Chemistry and Department of Biochemistry and Molecular Biology (Graduate School of Medicine), University of Tokyo, Tokyo, 113-0033, Japan
SOURCE: Molecular Pharmaceutics (2006), 3(2), 124-134
CODEN: MPOHBP; ISSN: 1543-8384
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:260374

AB A fullerene derivative bearing two diamino side chains binds to a plasmid vector DNA, either 4 or 40 kbp in size, delivers it to mammalian cells on incubation, and leads to expression of the encoded gene either transiently or stably. The initial physicochem. investigations upon DNA-binding and protective properties of various fullerene compds. against nuclease led us to identify the tetraamino fullerene as an ideal candidate to probe the new concept of fullerene-mediated gene delivery to mammalian cells. Studies on transient and stable transfection of COS-1 cells using green fluorescent protein and luciferase reporter genes revealed several useful properties of the fullerene transfection as compared with the conventional lipid-based transfection method, including much higher efficiency of stable transfection and ability to transfect confluent cells. Chemical and biol. studies suggested that the cell uptake of the fullerene/DNA complex takes place by an endocytosis mechanism and that the DNA internalized by endosomes is protected by the fullerene against enzymic digestion. The stiffness of the fullerene/DNA complex may play some role in the success of the fullerene method.

CC 63-5 (Pharmaceuticals)

IT 226420-73-1DP, complex with DNA
RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nonviral gene delivery by tetraamino fullerene)

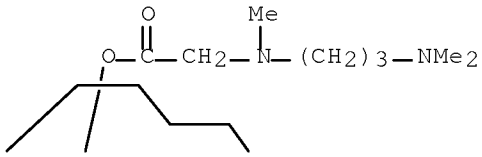
IT 226420-73-1P
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nonviral gene delivery by tetraamino fullerene)

IT 226420-73-1DP, complex with DNA
RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nonviral gene delivery by tetraamino fullerene)

RN 226420-73-1 ZCAPLUS

CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)

PAGE 1-A



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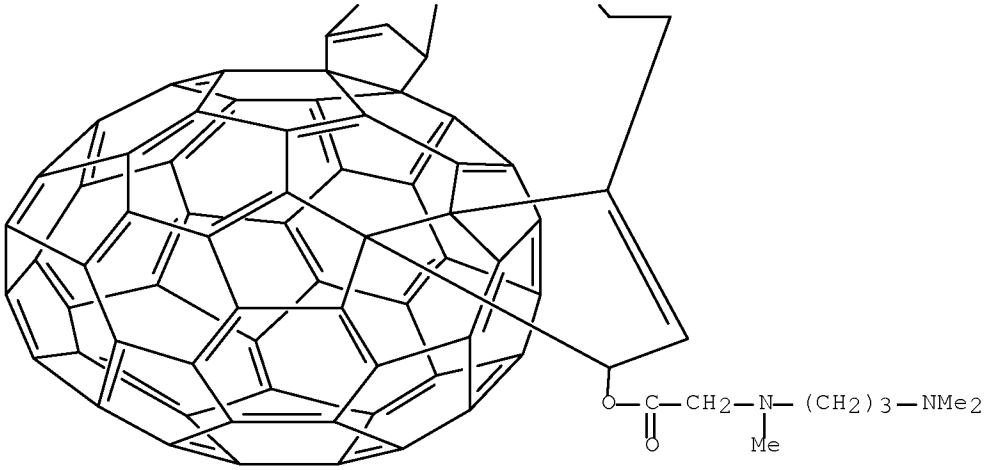
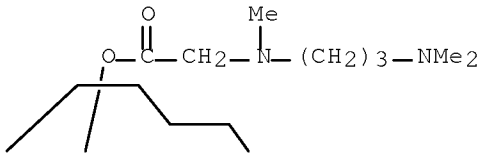


IT 226420-73-1P
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nonviral gene delivery by tetraamino fullerene)
RN 226420-73-1 ZCAPLUS
CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)

PAGE 1-A



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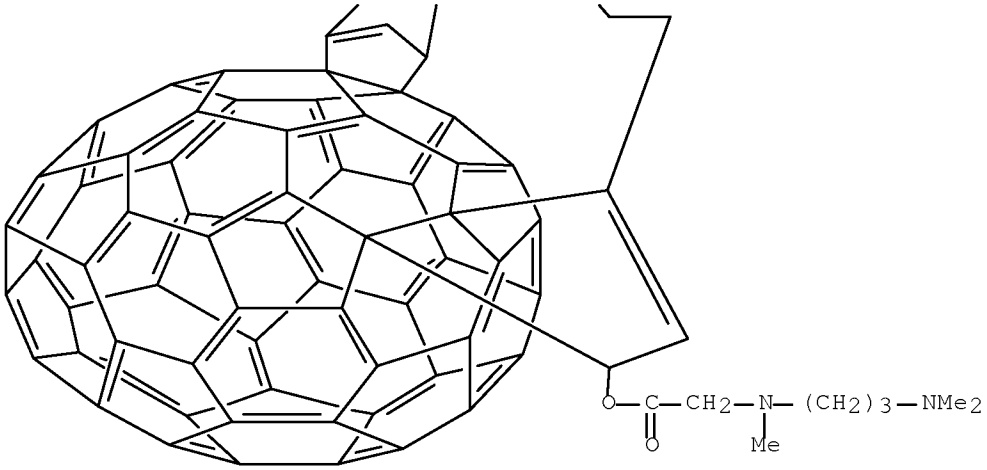


REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 7 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:760228 ZCAPLUS Full-text
DOCUMENT NUMBER: 143:341234
TITLE: Fractal Behavior of Functionalized Fullerene Aggregates. I. Aggregation of Two-Handed Tetraaminofullerene with DNA
AUTHOR(S): Ying, Qicong; Zhang, Jun; Liang, Dehai; Nakanishi, Waka; Isobe, Hiroyuki; Nakamura, Eiichi; Chu, Benjamin
CORPORATE SOURCE: Department of Chemistry, Stony Brook University, Stony Brook, NY, 11794-3400, USA
SOURCE: Langmuir (2005), 21(22), 9824-9831

CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In tris-buffered saline (TBS) with a trace of DMF, the homoaggregation process of a functionalized fullerene, the two-handed tetraaminofullerene (TH), and the heteroaggregation process (complex formation) of TH with DNA (pGL3-control plasmid) were studied dynamically by using a combination of static and dynamic laser light scattering measurements. Fractal behavior was investigated in the aggregation process of both TH homoaggregates and TH-DNA heteroaggregates. The stability of aggregates in solution depends on the molar concentration ratio RM, defined as the molar ratio of moles of TH to moles of the DNA base pair. Higher RM values resulted in lower aggregate stability. The transition of the fractal dimension (Df) in TH homoaggregation by rapidly mixing 3.78 μM TH with an equal volume of the blank buffer was found to vary from a value of 1.46 to 2.02. Dynamic light scattering results revealed that, in the aggregation process, the change in the size distribution of aggregates with time could be related to a Df transition. In the Df transition region, the size distribution of homoaggregates displayed a drastic change from a single-mode distribution to a bimodal distribution, which clearly suggested a restructuring process with the formation of large aggregates. When the aggregation process finally reached equilibrium, Df = 2.02, the size of the homoaggregates had a single mode but a broad distribution. However, TH-DNA heteroaggregation showed a Df transition from 1.58 to 1.7, but over a shorter time range of less than 5 min. Then, the Df value fluctuated in the range of 1.7 and finally reached an equilibrium value of Df ≈ 1.78, which was independent of molar concentration There are two main action forces involved in the heteroaggregation process: van der Waals forces and attractive electrostatic forces, with the latter one being stronger and faster than that of the former. Therefore, a two-step action could occur in the heteroaggregation process. In the beginning of mixing, the attractive electrostatic forces dictated the aggregation process, and then van der Waals forces also got involved in the entire aggregation process. By using an initial concentration of 3.78 μM each and RM = 1, TH-DNA heteroaggregates showed more stable solution behavior than the homoaggregates. The lower Df value of the heteroaggregates could be related to a looser compact structure. Results from SEM also disclosed the different textures between TH homoaggregates and TH-DNA heteroaggregates; the former had a more dense packing than the latter one.

CC 6-2 (General Biochemistry)

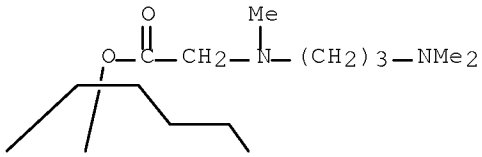
IT 226420-73-1
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(fractal behavior of functionalized fullerene aggregates and aggregation of two-handed tetraaminofullerene with DNA)

IT 226420-73-1
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(fractal behavior of functionalized fullerene aggregates and aggregation of two-handed tetraaminofullerene with DNA)

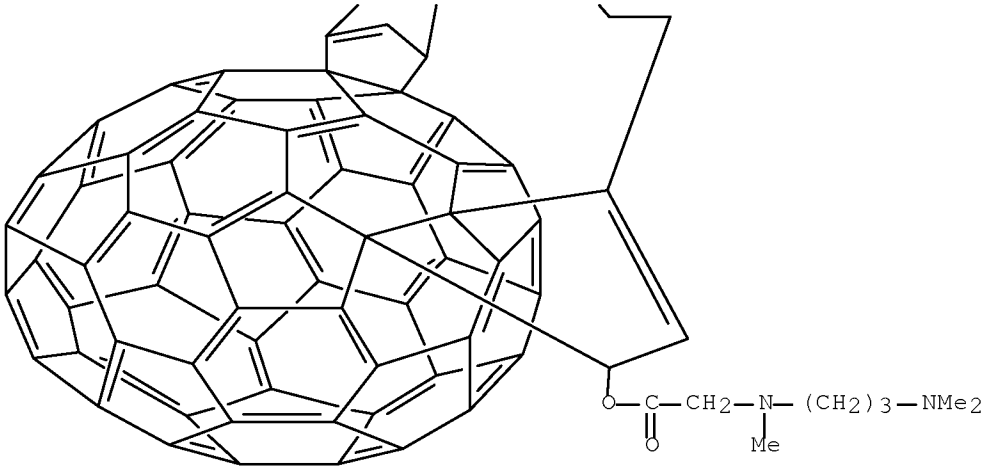
RN 226420-73-1 ZCAPLUS

CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 8 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:554174 ZCAPLUS Full-text
DOCUMENT NUMBER: 144:331668
TITLE: Synthesis and solubility of 6-aminohexanoic acid and 2-aminoethanesulfonic acid C60 adducts
AUTHOR(S): Liu, Xu-Feng; Guan, Wen-Chao; Cheng, Zhen-Xian
CORPORATE SOURCE: Department of Chemistry, Huazhong University of Science and Technology, Wuhan, 430074, Peop. Rep. China
SOURCE: Youji Huaxue (2005), 25(6), 741-744
CODEN: YCHHDX; ISSN: 0253-2786

PUBLISHER: Youji Huaxue Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
OTHER SOURCE(S): CASREACT 144:331668

AB Preparation of water soluble fullerenes (C60) derivs. is meaningful to biol. study of fullerenes. Amination reaction of amino-acid with C60 led to water soluble amino-acid C60 derivs. Reaction of C60 with excess of NH2(CH2)5COONa or NH2(CH2)2SO3Na (molar ratio is 1: 10) at 80 ℃ for 24 h afforded main amino-acid C60 adducts with addition degree of 5 and 4, resp. The yields based on the C60 added were 30% and 28%, resp. The addition degree was influenced by the length of hydrocarbon chain of amino-acid and precipitation of C60 adducts from the reactant. C60[NH(CH2)5COOH]5H5 (I) and C60(NHCH2CH2SO3H)4H4 (II) were further purified by silica column chromatog. and characterized by 1H NMR, 13C NMR, IR, FAB-MS spectra and elemental anal. The solubility of II was less pH dependent. The solubility of I in water at different pH was measured by the spectrophotometric method, exhibiting solubility of 71.81 mg·mL-1 (pH = 10.25), 23.68 mg·mL-1 (pH = 7) and 10.12 mg·mL-1 (pH = 3.36). The ε value of II at 272.8 nm was 3.43×104 L·mol-1·cm-1.

CC 34-2 (Amino Acids, Peptides, and Proteins)

IT 880763-63-3P 880763-66-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and solubility of 6-aminohexanoic acid and 2-aminoethanesulfonic acid C60 adducts)

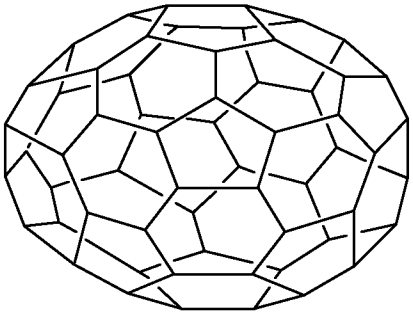
IT 880763-63-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and solubility of 6-aminohexanoic acid and 2-aminoethanesulfonic acid C60 adducts)

RN 880763-63-3 ZCAPLUS

CN Hexanoic acid, 6,6',6'',6''',6'''',6'''''-([5,6]fullerene-C60-Ih-pentaylpentaimino)pentakis- (9CI) (CA INDEX NAME)

CM 1

CRN 880763-62-2
CMF C90 H115 N5 O10
CCI IDS



5 [D1— NH— $(CH_2)_5$— CO_2H]

L64 ANSWER 9 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:790592 ZCAPLUS Full-text

DOCUMENT NUMBER: 141:388621
TITLE: Agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections
PATENT ASSIGNEE(S): Zakrytoe Aktsionernoe Obshchestvo "Desko", Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

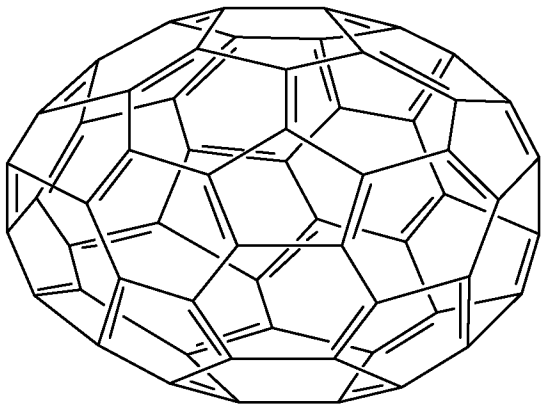
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2236852	C1	20040927	RU 2003-118500	20030623
AU 2004249090	A1	20041229	AU 2004-249090	20040531
CA 2530004	A1	20041229	CA 2004-2530004	20040531
WO 2004112804	A1	20041229	WO 2004-RU208	20040531
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1645279	A1	20060412	EP 2004-748919	20040531
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1819834	A	20060816	CN 2004-80017167	20040531
BR 2004011679	A	20060829	BR 2004-11679	20040531
JP 2007522082	T	20070809	JP 2006-517009	20040531
US 20060122276	A1	20060608	US 2005-559681	20051206
IN 2006DN00326	A	20070817	IN 2006-DN326	20060118

PRIORITY APPLN. INFO.: RU 2003-118500 A 20030623
WO 2004-RU208 W 20040531

OTHER SOURCE(S): MARPAT 141:388621

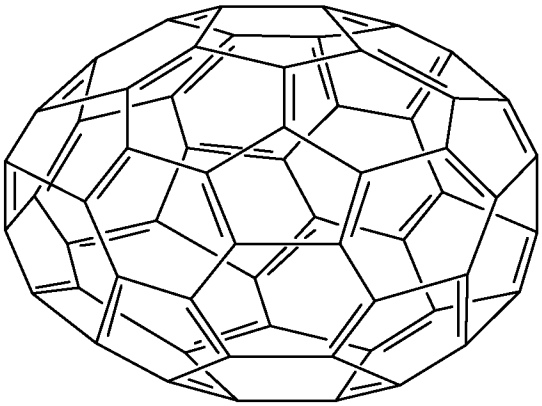
AB Agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections are disclosed. The invention relates to the development of agent for inhibition of reproduction of enveloped viruses. The invention proposes the group of inventions combined by the general inventive project involving a method for preparing compds., development of pharmaceutical compns. and methods for treatment using those compds. and compns., agent based on fullerene polycarboxylic anions for inhibition of the activity of enveloped viruses in treatment of the diseases caused by these viruses. Choice of such quant. ratios of components and conditions for carrying out the reaction provide preparing products of poly-addition In carrying out synthesis amount of amino acid has to exceed amount of fullerene by more 50 times. The invention relates also to a method for inhibition of reproduction of enveloped viruses in treatment of diseases caused by HIV/AIDS, herpes infections, viral hepatitis C. Invention provides preparing product that has unlimited solubility in water, necessary bioavailability, high effectiveness on infected cells and low toxicity. The content of basic substance in the end product is 87%, not less. Process shows technol. effectiveness and can be used in pharmaceutical industry.

IC ICM A61K031-66
ICS A61K031-225; A61K031-785; A61K038-55; A61P031-18
CC 1-5 (Pharmacology)
Section cross-reference(s): 63
IT Amino acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections)
IT Amino acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(salts, potassium and sodium; agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections)
IT 99685-96-8DP, Fullerene, homologs
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections)
IT 99685-96-8, Fullerene
RL: RCT (Reactant); RACT (Reactant or reagent)
(agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections)
IT 99685-96-8DP, Fullerene, homologs
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections)
RN 99685-96-8 ZCAPLUS
CN [5,6]Fullerene-C60-Ih (CA INDEX NAME)



IT 99685-96-8, Fullerene
RL: RCT (Reactant); RACT (Reactant or reagent)
(agent for inhibition of reproduction of enveloped viruses, method for its preparing, pharmaceutical composition and method for inhibition of viral infections)

RN 99685-96-8 ZCAPLUS
CN [5,6]Fullerene-C60-Ih (CA INDEX NAME)



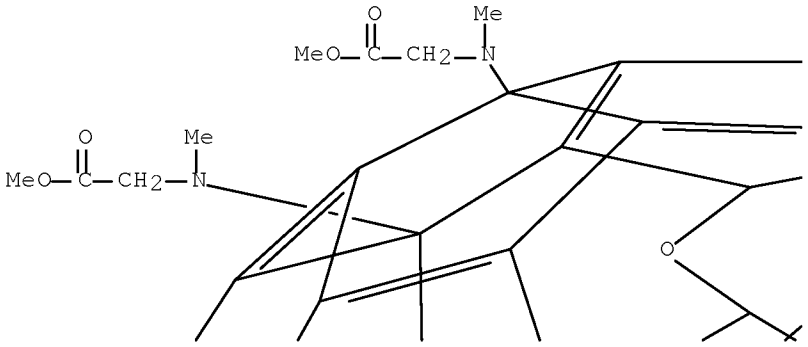
L64 ANSWER 10 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:595195 ZCAPLUS Full-text
DOCUMENT NUMBER: 141:277434
TITLE: Iodo-Controlled Selective Formation of Pyrrolidino[60]fullerene and Aziridino[60]fullerene from the Reaction between C60 and Amino Acid Esters
AUTHOR(S): Zhang, Xiang; Gan, Liangbing; Huang, Shaohua; Shi, Yaru
CORPORATE SOURCE: Key Laboratory of Bioorganic Chemistry and Molecular, Engineering of the Ministry of Education, College of Chemistry and Molecular Engineering, Peking University, Beijing, 100871, Peop. Rep. China
SOURCE: Journal of Organic Chemistry (2004), 69(17), 5800-5802
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:277434

AB The reaction between glycine Me ester and C60 can be effectively controlled by different iodo-reagents. Addition of DIB ((diacetoxyiodo)benzene) yields the 2,5-bismethoxycarbonyl pyrrolidino[60]fullerene under ultrasonic irradiation; whereas addition of DIB-iodine results in the N-methoxycarbonylmethyl aziridino[60]fullerene under ultrasonic irradiation The reaction of sarcosine Me ester with C60 is similar to that of glycine Me ester under these two conditions. Addition of just iodine to a mixture of sarcosine Me ester and C60 affords the tetra(amino)[60]fullerene epoxide C60(O)((Me)NCH2COOMe)4. Possible mechanisms are discussed.

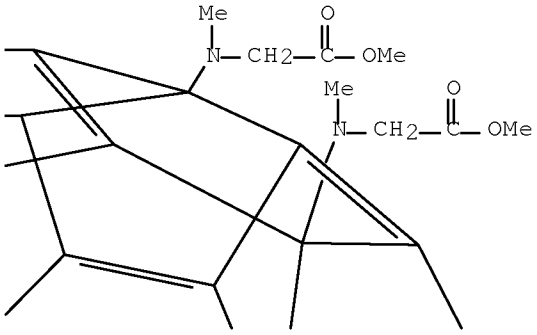
CC 27-10 (Heterocyclic Compounds (One Hetero Atom))
IT 170501-68-5P 175875-62-4P 760192-22-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(iodo-controlled reactions of C60 and amino acid esters under microwave irradiation)
IT 760192-22-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(iodo-controlled reactions of C60 and amino acid esters under microwave irradiation)
RN 760192-22-1 ZCAPLUS

CN Glycine, N,N',N'',N'''-(9a-oxa-1,9(9a)-homo[5,6]fullerene-C60-Ih-6,12,15,18-tetrayl)tetrakis[N-methyl-, tetramethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



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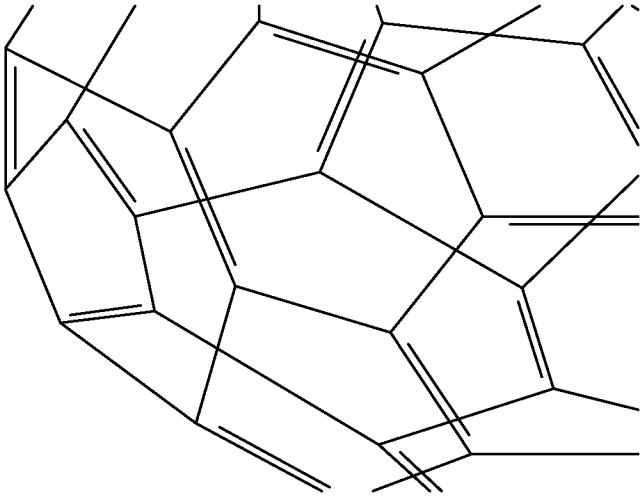
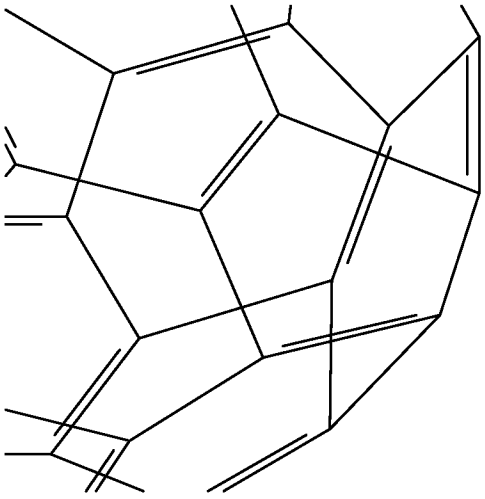
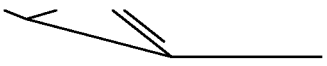


PAGE 2-B



PAGE 3-A

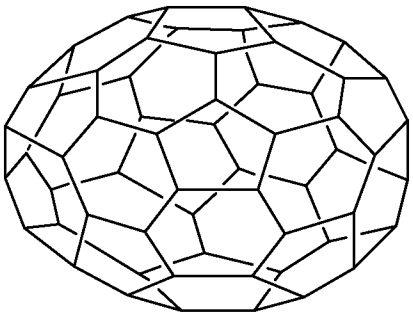


REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 11 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:214128 ZCAPLUS Full-text
DOCUMENT NUMBER: 140:423925
TITLE: Different hydroxyl radical scavenging activity of water-soluble β-alanine C60 adducts
AUTHOR(S): Sun, Tao; Jia, Zhishen; Xu, Zhude
CORPORATE SOURCE: College of Food Science, Shanghai Fisheries University, Shanghai, 200090, Peop. Rep. China
SOURCE: Bioorganic & Medicinal Chemistry Letters (2004), 14(7), 1779-1781
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:423925
AB Three C60 derivs. [[C60 (NHCH2CH2COONa)n(H)n], n=1, 5, 9] with different addnl. number of β-alanine were synthesized by the control of relative amount of C60 and β-alanine added. Hydroxyl radical scavenging activity of the adducts was evaluated in a copper-catalyzed Haber-Weiss reaction by chemiluminescence technol. The 50% inhibition concns. (IC50's) of A, B, and C were 147.2 μmol/L, 76.3 μmol/L, and 96.2 μmol/L, resp. The difference should be closely related to the nos. of residual C:C bonds in C60, steric effect and electron-withstanding effect of amino group especially
CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22, 25
IT 159510-93-7P 634929-28-5P 635303-26-3P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(preparation and hydroxyl radical scavenging activity of beta alanine fullerene adducts evaluated in copper-catalyzed Haber-Weiss reaction by chemiluminescence technol.)
IT 159510-93-7P 635303-26-3P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(preparation and hydroxyl radical scavenging activity of beta alanine fullerene adducts evaluated in copper-catalyzed Haber-Weiss reaction by chemiluminescence technol.)
RN 159510-93-7 ZCAPLUS
CN β-Alanine, N,N',N'',N''',N'''',N''''',N'''''',N''''''',N'''''''',N'''''''''-(octahydro[5,6]fullerene-C60-Ih-nonayl)nonakis-, nonasodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 159475-44-2
CMF C87 H105 N9 O18
CCI IDS

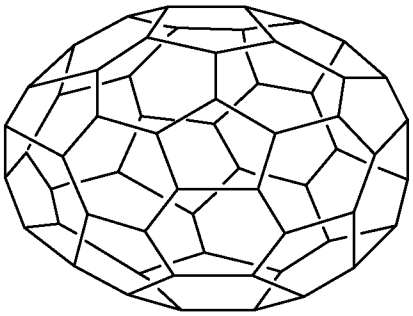


9 [D1—NH—CH_2—CH_2—CO_2H]

RN 635303-26-3 ZCAPLUS
CN β-Alanine, N,N',N'',N''',N''''-(decahydro[5,6]fullerene-C60-Ih-pentayl)pentakis-, pentasodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 635303-25-2
CMF C75 H85 N5 O10
CCI IDS



5 [D1—NH—CH_2—CH_2—CO_2H]

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 12 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:826902 ZCAPLUS Full-text
DOCUMENT NUMBER: 140:96298
TITLE: Method for preparing water-soluble salts of amino acid derivatives of fullerene
INVENTOR(S): Rasnetsov, L. D.; Shvartsman, Ya. Yu.; Lyalina, I. K.; Rasnetsova, B. E.; Karnatsevich, V. L.; Suvorova, O. N.; Kutyreva, V. V.; Shchupak, E. A.; Bazyakina, N.

L.; Makarov, S. G.
PATENT ASSIGNEE(S): Zakrytoe Aktsionernoe Obshchestvo "Desko", Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2213048	C1	20030927	RU 2002-118282	20020708
PRIORITY APPLN. INFO.:			RU 2002-118282	20020708

AB The invention relates to the improved method for preparing water- soluble salts of amino acid derivs. of fullerene that can be used in medicine, pharmacol. and microbiol. Invention describes method for preparing water-soluble salts of amino acid derivs. of fullerene of the general formula HC60NH(CH2)nCOOM wherein C60 is a fullerene ring; M is alkaline metal; n = 1, 3, 5. The method involves interaction of fullerene with amino acid salt in an organic solvent medium at heating and the following isolation of the end product. Interaction reaction is carried out in the presence of low-mol. polyalkylene oxide with mol. mass 150-400 Da. The invention provides reduced process time, and reduced manufacturing cost due to use of inexpensive raw materials.

IC ICM C01B031-02
ICS C07C229-06
CC 49-5 (Industrial Inorganic Chemicals)
IT 99685-96-8DP, Fullerene, alkali metal amino acid salt derivs.
645420-16-2P 645420-18-4P 645420-20-8P
645420-22-0P 645420-23-1P 645420-24-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(method for preparing water-soluble salts of amino acid derivs. of fullerene)
IT 645420-16-2P 645420-18-4P 645420-20-8P
645420-22-0P 645420-23-1P 645420-24-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(method for preparing water-soluble salts of amino acid derivs. of fullerene)
RN 645420-16-2 ZCAPLUS
CN Glycine, N-[5,6]fulleren-C60-Ih-1(?H)-yl-, monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 645420-15-1
CMF C62 H63 N O2

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 645420-18-4 ZCAPLUS
CN Butanoic acid, 4-([5,6]fulleren-C60-Ih-1(?H)-ylamino)-, monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 645420-17-3
CMF C64 H67 N O2

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 645420-20-8 ZCAPLUS
CN Hexanoic acid, 6-([5,6]fulleren-C60-Ih-1(?H)-ylamino)-, monosodium salt

(9CI) (CA INDEX NAME)

CM 1

CRN 645420-19-5
CMF C66 H71 N O2

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 645420-22-0 ZCAPLUS
CN Hexanoic acid, 6-([5,6]fulleren-C60-Ih-1(?H)-ylamino)-, monopotassium salt (9CI) (CA INDEX NAME)

CM 1

CRN 645420-19-5
CMF C66 H71 N O2

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 645420-23-1 ZCAPLUS
CN Butanoic acid, 4-([5,6]fulleren-C60-Ih-1(?H)-ylamino)-, monopotassium salt (9CI) (CA INDEX NAME)

CM 1

CRN 645420-17-3
CMF C64 H67 N O2

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 645420-24-2 ZCAPLUS
CN Glycine, N-[5,6]fulleren-C60-Ih-1(?H)-yl-, monopotassium salt (9CI) (CA INDEX NAME)

CM 1

CRN 645420-15-1
CMF C62 H63 N O2

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L64 ANSWER 13 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:604154 ZCAPLUS Full-text
DOCUMENT NUMBER: 140:42435
TITLE: Effect of functional groups on the activity of water-soluble β-alanine C60 derivatives for superoxide anion radical scavenging
AUTHOR(S): Sun, Tao; Xu, Zhu-De; Jia, Zhi-Shen
CORPORATE SOURCE: Dep. Chem., Yuquan Campus, Zhejiang Univ., Hangzhou, 310027, Peop. Rep. China
SOURCE: Gaodeng Xuexiao Huaxue Xuebao (2003), 24(7), 1231-1233
CODEN: KTHPDM; ISSN: 0251-0790
PUBLISHER: Gaodeng Jiaoyu Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
OTHER SOURCE(S): CASREACT 140:42435
AB Three water-soluble β-alanine C60 adducts with different addition nos., C60(NHCH2CH2COONa)nHn (n = 1, 5, 9), were synthesized. The products were characterized by FTIR, 1H NMR and elemental anal. The antioxidant activity of these C60 adducts as the quencher for superoxide anion radical O2-• was evaluated by chemiluminescence in the system of pyrogallol-luminol. The

results indicate that the three C60 derivs. are all excellent quencher for superoxide anion radical O2-•. The concns. of 50% inhibition are 252, 140, 112. μmol/L resp. This high efficiency should be attributed to many factors such as the nos. of remaining double bonds, donor effect of amino group and steric effect. However, the above results also suggest the effect of the adducted β-alanine groups is predominated in this system.

CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1, 22

IT 159510-93-7P 634929-28-5P 635303-26-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(effect of functional groups on activity of water-soluble β-alanine C60 derivs. for superoxide anion radical scavenging)

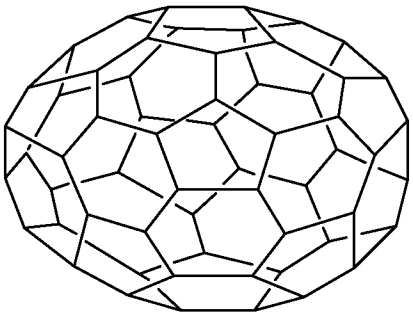
IT 159510-93-7P 635303-26-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(effect of functional groups on activity of water-soluble β-alanine C60 derivs. for superoxide anion radical scavenging)

RN 159510-93-7 ZCAPLUS

CN β-Alanine, N,N',N'',N''',N'''',N''''',N'''''',N'''''',N''''''''-(octahydro[5,6]fullerene-C60-Ih-nonayl)nonakis-, nonasodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 159475-44-2
CMF C87 H105 N9 O18
CCI IDS



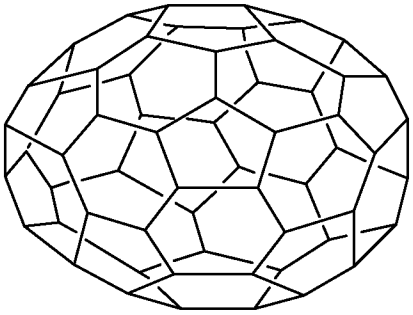
9 [D1—NH—CH2—CH2—CO2H]

RN 635303-26-3 ZCAPLUS

CN β-Alanine, N,N',N'',N''',N''''-(decahydro[5,6]fullerene-C60-Ih-pentayl)pentakis-, pentasodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 635303-25-2
CMF C75 H85 N5 O10
CCI IDS



5 [D1—NH—CH_2—CH_2—CO_2H]

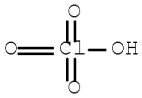
L64 ANSWER 14 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:630884 ZCAPLUS Full-text
DOCUMENT NUMBER: 138:321350
TITLE: Synthesis and characterization of rare-earth fullerene complex
AUTHOR(S): Li, Jian-lin; Lin, Yong-sheng; Wu, Zhen-yi; Yang, Sen-gen; Cheng, Da-dian; Zhan, Meng-xiong
CORPORATE SOURCE: Dept. of Chem., Xiamen Univ., Xiamen, 361005, Peop. Rep. China
SOURCE: Xiamen Daxue Xuebao, Ziran Kexueban (2002), 41(4), 453-455
CODEN: HMHHAF; ISSN: 0438-0479
PUBLISHER: Xiamen Daxue
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
OTHER SOURCE(S): CASREACT 138:321350

AB New rare-earth and buckminsterfullerene[60] complex, C60[La(Gly)2]2(ClO4)6 has been synthesized, and characterized by UV-VIS, IR and elemental anal. The result shows that the rare-earth fullerene complex of η2-form can be synthesized through substituent reaction by using C60 bonding to La(Gly)4Im(ClO4)3. In addition, the structure of the complex was supposed.

CC 29-10 (Organometallic and Organometalloidal Compounds)
IT 511519-43-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis and characterization of lanthanum fullerene glyoxime complex)
IT 511519-43-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis and characterization of lanthanum fullerene glyoxime complex)
RN 511519-43-0 ZCAPLUS
CN Lanthanum(2+), [μ-[(1,9-η:52,60-η)-[5,6]fullerene-C60-Ih]]tetrakis(glycinato-κO)di-, diperchlorate, tetraperchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 7601-90-3
CMF Cl H O4



CM 2

CRN 511519-42-9
CMF C68 H16 La2 N4 O8 . 2 Cl O4

CM 3

CRN 511519-41-8
CMF C68 H16 La2 N4 O8
CCI CCS

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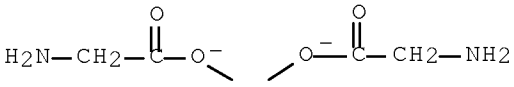
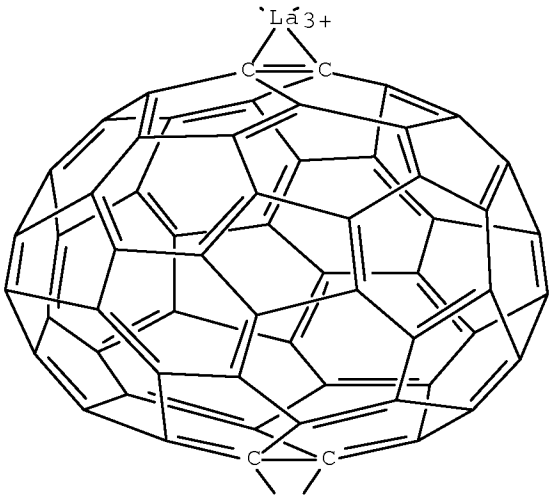


PAGE 2-A



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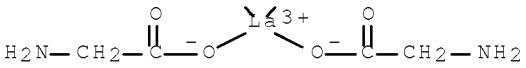
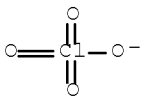


CM 4

CRN 14797-73-0
CMF Cl O4



L64 ANSWER 15 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:902293 ZCAPLUS Full-text
DOCUMENT NUMBER: 136:294749
TITLE: Synthesis and transfection capability of multi-functionalized fullerene polyamine
AUTHOR(S): Isobe, Hiroyuki; Tomita, Naoki; Jinno, Shigeki; Okayama, Hiroto; Nakamura, Eiichi
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, The University of Tokyo, Tokyo, 113-0033, Japan
SOURCE: Chemistry Letters (2001), (12), 1214-1215
CODEN: CMLTAG; ISSN: 0366-7022

PUBLISHER: Chemical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:294749

AB A new fullerene transfection reagent bearing multiple-functional groups has been synthesized by diastereoselective double cycloaddn. reaction. The highly oxygenated reagent transfers extracellular DNA into mammalian cells with an efficiency comparable to that of a nor-analog.

CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 3

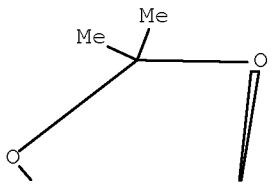
IT 407617-27-0P
RL: BCP (Biochemical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(preparation and transfection ability of multifunctionalized fullerene polyamine)

IT 407617-27-0P
RL: BCP (Biochemical process); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(preparation and transfection ability of multifunctionalized fullerene polyamine)

RN 407617-27-0 ZCAPLUS

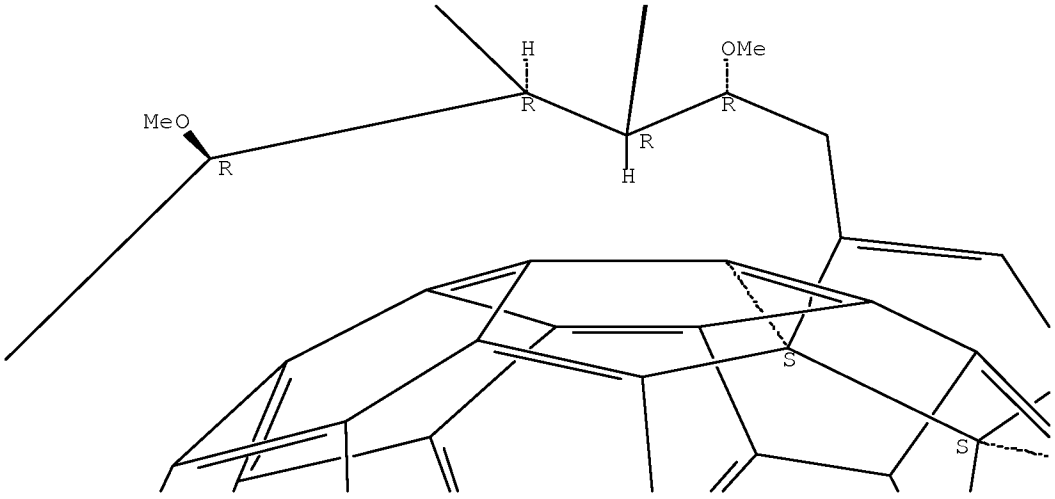
CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, (1S,7'R,8'R,9S,9'R,13S,13'R,14S)-8',9'-dihydro-7',13'-dimethoxy-11',11'-dimethyl-5',5''-(ethano[4,5]-endo-[1,3]dioxoloethano)-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3,3''-diyl ester (CA INDEX NAME)

Absolute stereochemistry.



PAGE 2-B

PAGE 2-C



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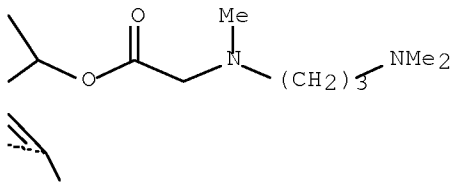

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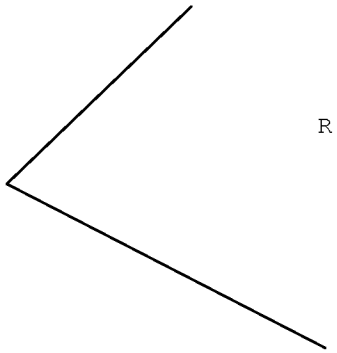

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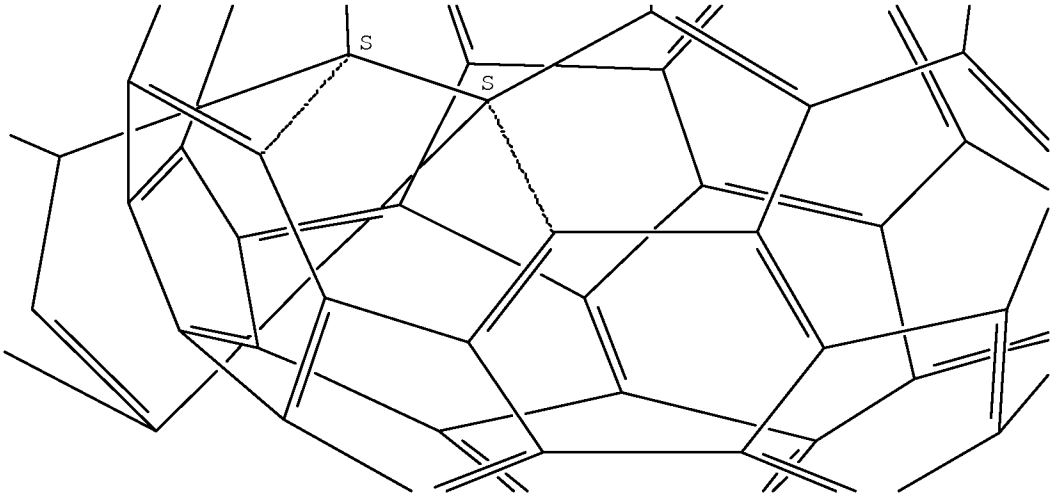

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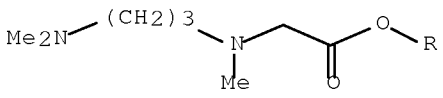

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 16 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:733394 ZCAPLUS Full-text
DOCUMENT NUMBER: 136:81466
TITLE: Atomic force microscope studies on condensation of plasmid DNA with functionalized fullerenes
AUTHOR(S): Isobe, Hiroyuki; Sugiyama, Sho; Fukui, Ken-ichi; Iwasawa, Yasuhiro; Nakamura, Eiichi
CORPORATE SOURCE: Department of Chemistry, University of Tokyo, Tokyo, 113-0033, Japan
SOURCE: Angewandte Chemie, International Edition (2001), 40(18), 3364-3367
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB DNA condensation by a fullerene vector has been imaged at the mol. level by atomic force microscopy (AFM). Anal. of a mixture of plasmid DNA and DNA-binding fullerene with the aid of this carbonaceous vector provided the first information on the mechanism of transfection.
CC 6-2 (General Biochemistry)
IT 226420-73-1 226420-75-3
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(atomic force microscope studies on condensation of plasmid DNA with functionalized fullerenes)
IT 226420-73-1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(atomic force microscope studies on condensation of plasmid DNA with functionalized fullerenes)
RN 226420-73-1 ZCAPLUS
CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)

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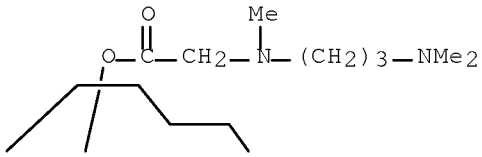

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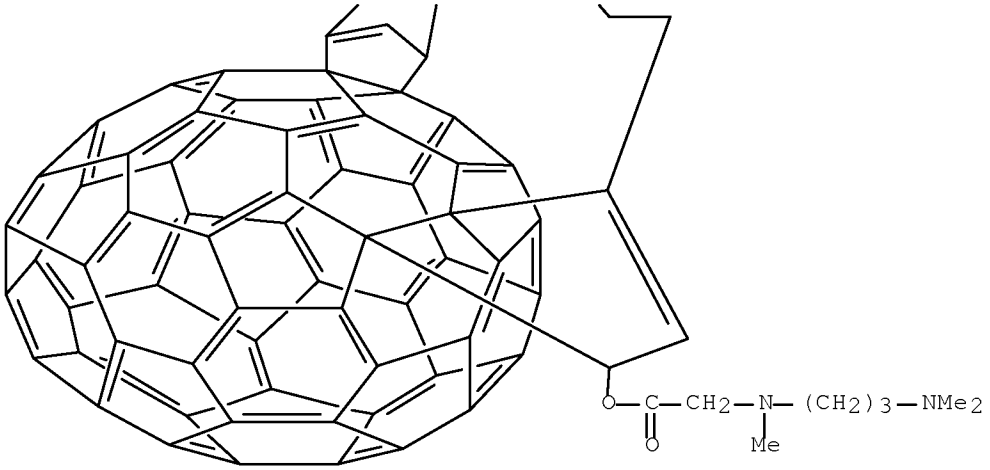


REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 17 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:894324 ZCAPLUS Full-text
DOCUMENT NUMBER: 135:71840
TITLE: Functionalized fullerene as an artificial vector for transfection
AUTHOR(S): Nakamura, Eiichi; Isobe, Hiroyuki; Tomita, Naoki; Sawamura, Masaya; Jinno, Shigeki; Okayama, Hiroto
CORPORATE SOURCE: Department of Chemistry, The University of Tokyo, Tokyo, 113-0033, Japan
SOURCE: Angewandte Chemie, International Edition (2000), 39(23), 4254-4257

CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors synthesized a two-handed fullerene tetramine as well as various related compds. The affinities of these reagents for DNA duplexes were probed. The authors report that the two-handed fullerene tetramine is unique among other fullerenes in its ability to bind to duplex DNA in a reversible manner. Use of the derived fullerene as an artificial vector for transfection is described.

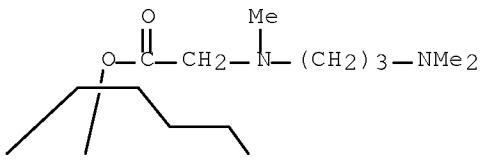
CC 3-2 (Biochemical Genetics)

IT 99685-96-8DP, C60 Fullerene, derivs. 226420-72-0P 226420-73-1P 226420-74-2P 226420-75-3P 226420-76-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(functionalized fullerene as artificial vector for transfection)

IT 226420-73-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(functionalized fullerene as artificial vector for transfection)

RN 226420-73-1 ZCAPLUS

CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)



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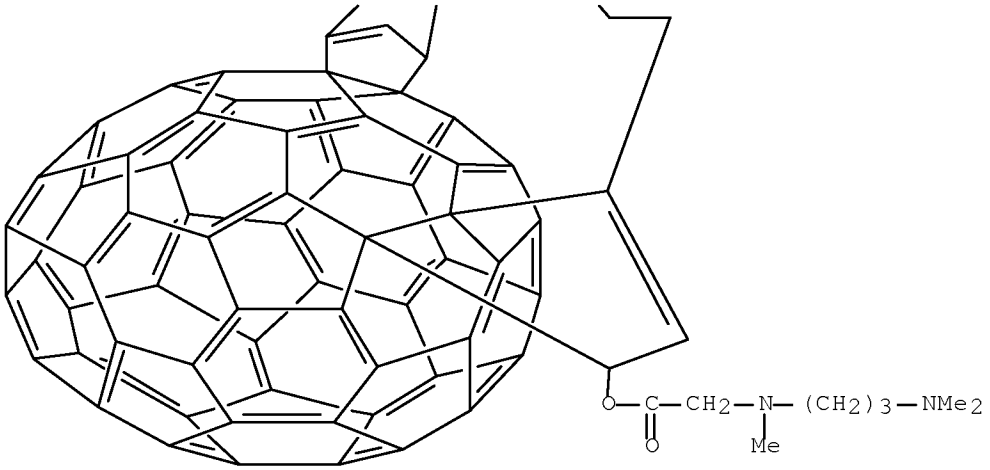

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 18 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:634986 ZCAPLUS Full-text
DOCUMENT NUMBER: 133:222456
TITLE: Preparation of amphiphilic fullerenes
INVENTOR(S): Ohishi, Kei; Shinkai, Seiji
PATENT ASSIGNEE(S): Foundation for Scientific Technology Promotion, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000247935	A	20000912	JP 1999-45704	19990224

PRIORITY APPLN. INFO.: JP 1999-45704 19990224
OTHER SOURCE(S): MARPAT 133:222456
GI

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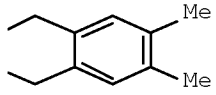

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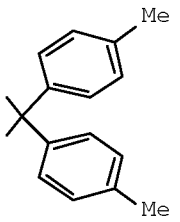

AB (FL)Y(O2CXN+Me3Br-)2 [I: FL = fullerene residue; X = (CH2)n, (C2H4O)m(CH2)2; Y = Q1, Q2; n = 6-12; m = 2-4]. [60]Fullerene was condensed with 1,2-dibromo-4,5-dimethoxybenzene, demethylated with BBr3, esterified with Br(CH2)10CO2H, and treated with NMe3 to give I [X = (CH2)10, Y = Q1], which formed a bimol. membrane in H2O.

IC ICM C07C229-12

CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT 250664-90-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of amphiphilic fullerenes)

IT 250664-90-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of amphiphilic fullerenes)

RN 250664-90-5 ZCAPLUS

CN 1-Undecanaminium, 11,11'-(1',4'-dihydronaphtho[2',3':1,9][5,6]fullerene-C60-Ih-6',7'-diyl)bis[N,N,N-trimethyl-11-oxo-, dibromide (9CI) (CA INDEX NAME)

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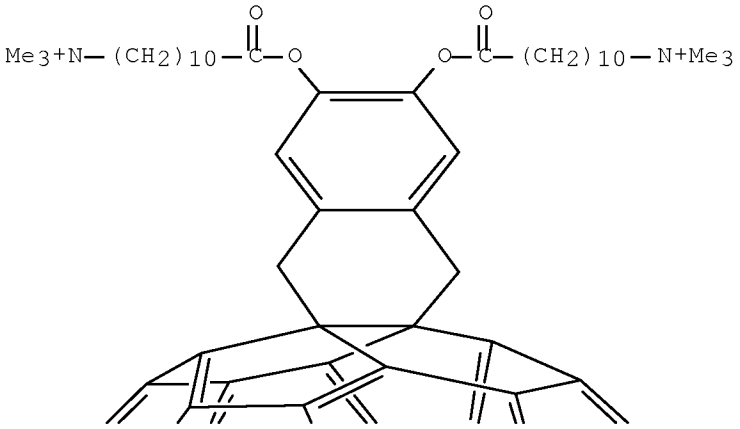

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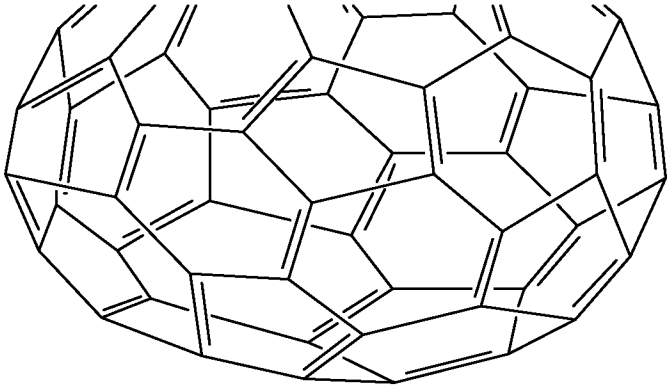

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L64 ANSWER 19 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:341607 ZCAPLUS Full-text
DOCUMENT NUMBER: 133:120270
TITLE: A novel reaction: [60,70]fullerene reacting with 4,4,5,5-tetramethylimidazoline-2-thione and α-amino acids as carbene reaction
AUTHOR(S): Xu, Ju-Hua; Li, Yu-Liang; Guo, Zhi-Xin; Li, Feng-Ying; Shi, Zhi-Qiang; Pan, Cai-Yuan; Zhu, Dao-Ben
CORPORATE SOURCE: The Center for Molecular Science, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100080, Peop. Rep. China
SOURCE: Journal of Physics and Chemistry of Solids (2000), 61(7), 1081-1088
CODEN: JPCSAW; ISSN: 0022-3697
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:120270

AB Fullerenes C60 and C70 undergo a [1+2]cycloaddn. reaction with 4,4,5,5-tetramethylidazoline-2-thione (I) and DL-valine. C60 was also reacted with I and L-leucine and α-aminoisobutyric acid in order to understand the reaction better and a possible mechanism was put forward based on the results of characterization. In this reaction, reaction temperature was very important due to the reactivity of different α-amino acids and the results also show that DL-valine was more reactive than the other two α-amino acids.

CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))
IT Amino acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of fullerene C60 and C70 with 4,4,5,5-tetramethylimidazoline-2-thione and α-amino acids)
IT 61-90-5, L-Leucine, reactions 62-57-7, 2-Aminoisobutyric acid 516-06-3, Valine 32349-17-0 99685-96-8, [5,6]Fullerene-C60-Ih 115383-22-7, Fullerene C70

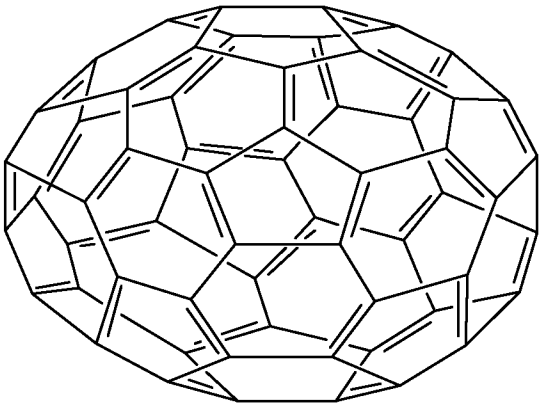
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of fullerene C60 and C70 with
4,4,5,5-tetramethylimidazoline-2-thione and α-amino acids)

IT 99685-96-8DP, Fullerene C60, tris adduct with
4,4,5,5-tetramethylimidazolidine-2-thione
RL: SPN (Synthetic preparation); PREP (Preparation)
(reaction of fullerene C60 and C70 with
4,4,5,5-tetramethylimidazoline-2-thione and α-amino acids)

IT 99685-96-8, [5,6]Fullerene-C60-Ih
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of fullerene C60 and C70 with
4,4,5,5-tetramethylimidazoline-2-thione and α-amino acids)

RN 99685-96-8 ZCAPLUS

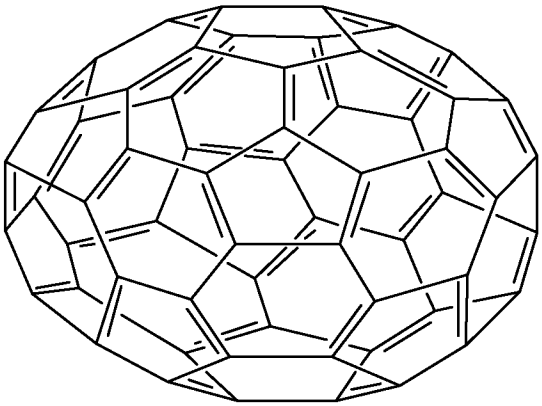
CN [5,6]Fullerene-C60-Ih (CA INDEX NAME)



IT 99685-96-8DP, Fullerene C60, tris adduct with
4,4,5,5-tetramethylimidazolidine-2-thione
RL: SPN (Synthetic preparation); PREP (Preparation)
(reaction of fullerene C60 and C70 with
4,4,5,5-tetramethylimidazoline-2-thione and α-amino acids)

RN 99685-96-8 ZCAPLUS

CN [5,6]Fullerene-C60-Ih (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 20 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:161809 ZCAPLUS Full-text
DOCUMENT NUMBER: 132:313992
TITLE: Vesicle Formation and Its Fractal Distribution by Bola-Amphiphilic [60]Fullerene
AUTHOR(S): Sano, Masahito; Oishi, Kei; Ishi, Tsutomu; Shinkai, Seiji
CORPORATE SOURCE: Chemotransfiguration Project - JST, Kurume, Fukuoka, 839-0861, Japan
SOURCE: Langmuir (2000), 16(8), 3773-3776
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A novel amphiphilic [60]fullerene derivative with two ammonium headgroups is synthesized, and its self-organization characteristics in water in the scale ranging from nanometer to micrometer are reported. At the mol. scale, the bola-amphiphilic [60]fullerene forms spherical vesicles. These vesicles, in turn, are placed within a thin wall producing a foamlike network in the scale-up to a few micrometers. TEM and light scattering measurements demonstrate that the mesoscopic-scale structure is self-similar and fractal with the dimension D = 1.40. The novel aggregation modes result from the hydrophobic interaction produced by the [60]fullerene moieties exposed to water mols. by the disordered alkyl tails.

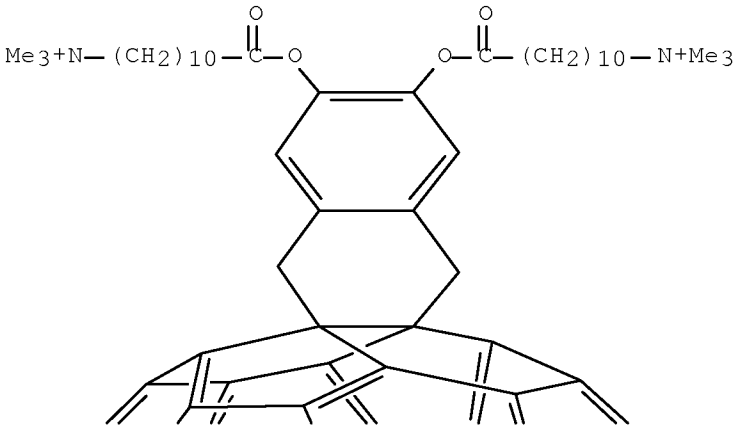
CC 66-2 (Surface Chemistry and Colloids)
Section cross-reference(s): 3, 22, 73

IT 250664-88-1P 250664-89-2P 250664-90-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(vesicle formation and fractal distribution by bola-amphiphilic C60-fullerene derivs.)

IT 250664-90-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(vesicle formation and fractal distribution by bola-amphiphilic C60-fullerene derivs.)

RN 250664-90-5 ZCAPLUS
CN 1-Undecanaminium, 11,11'-(1',4'-dihydronaphtho[2',3':1,9][5,6]fullerene-C60-Ih-6',7'-diyl)bis[N,N,N-trimethyl-11-oxo-, dibromide (9CI) (CA INDEX NAME)

PAGE 1-A



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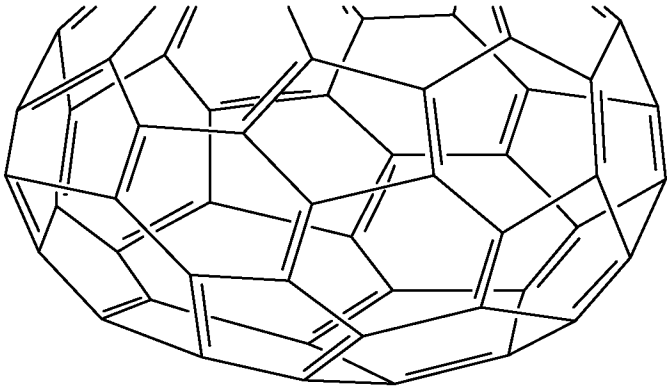


PAGE 3-A

●2 Br^-

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 21 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:661948 ZCAPLUS Full-text
DOCUMENT NUMBER: 131:356589
TITLE: Unexpected discovery of a novel organic gel system comprised of [60]fullerene-containing amphiphiles
AUTHOR(S): Oishi, Kei; Ishi-I, Tsutomu; Sano, Masahito; Shinkai, Seiji

CORPORATE SOURCE: Chemotransfiguration Project-JST, Fukuoka, 839-0861, Japan
SOURCE: Chemistry Letters (1999), (10), 1089-1090
CODEN: CMLTAG; ISSN: 0366-7022
PUBLISHER: Chemical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A [60]fullerene-containing amphiphile bearing two ammonium groups was synthesized. When the methanol solution was left at room temperature for a few days, it was totally transformed into an organic gel. The transformation process was fully characterized by transmission electron microscopy and X-ray diffraction. This is the first example for the [60]fullerene-containing organic gel.

CC 66-4 (Surface Chemistry and Colloids)

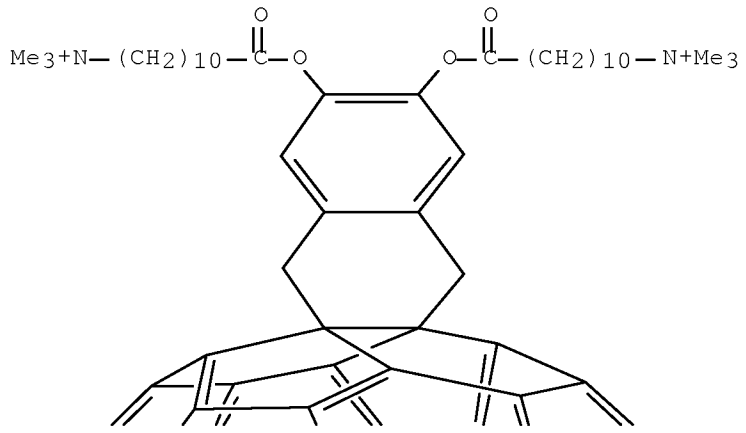
IT 250664-90-5P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(a novel organic gel system comprised of [60]fullerene-containing amphiphiles
in methanol solution)

IT 250664-90-5P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(a novel organic gel system comprised of [60]fullerene-containing amphiphiles
in methanol solution)

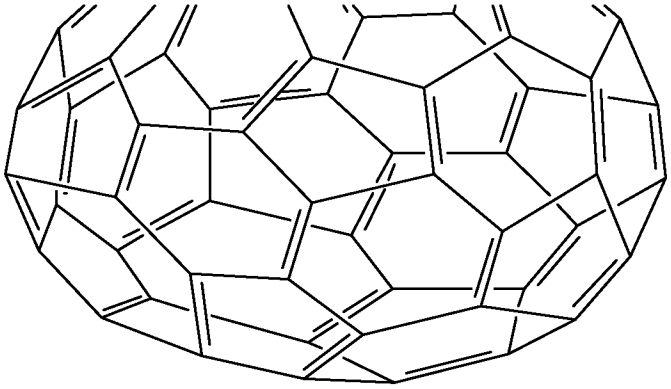
RN 250664-90-5 ZCAPLUS

CN 1-Undecanaminium, 11,11'-(1',4'-dihydronaphtho[2',3':1,9][5,6]fullerene-C60-Ih-6',7'-diyl)bis[N,N,N-trimethyl-11-oxo-, dibromide (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



PAGE 3-A

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 22 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:595122 ZCAPLUS Full-text
DOCUMENT NUMBER: 131:237139
TITLE: Fullerene derivatives for potential use in gene therapy
INVENTOR(S): Nakamura, Eiichi; Sawamura, Masaya; Isobe, Hiroyuki
PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

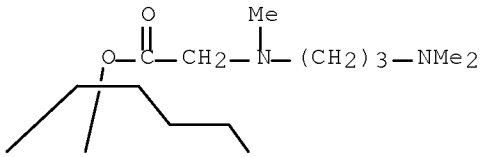
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9946235	A1	19990916	WO 1999-JP1146	19990310
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1069107	A1	20010117	EP 1999-907890	19990310
EP 1069107	B1	20050511		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
EP 1420066	A2	20040519	EP 2004-2101	19990310
EP 1420066	A3	20050105		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
AT 295345	T	20050515	AT 1999-907890	19990310
US 6765098	B1	20040720	US 2000-622915	20001117
US 20040214218	A1	20041028	US 2004-846646	20040517
US 7018599	B2	20060328		
PRIORITY APPLN. INFO.:			JP 1998-58614 A	19980310
			EP 1999-907890 A3	19990310

WO 1999-JP1146 W 19990310
US 2000-622915 A3 20001117
OTHER SOURCE(S): MARPAT 131:237139

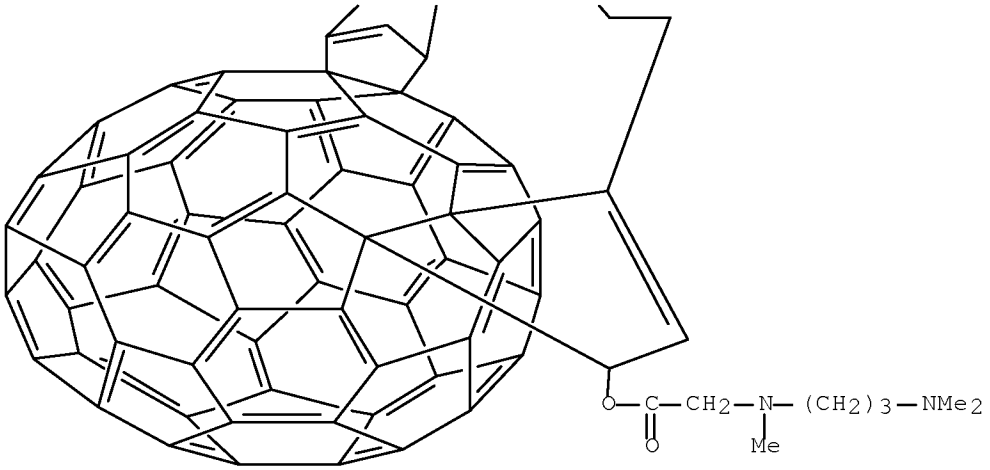
AB This document discloses a novel means for DNA compaction. Fullerene derivs. having 1 to 4 nitrogen-containing hydrophilic side chains or salts thereof are to be used in the above means. A fullerene derivative was prepared and tested using calf thymus DNA and ethidium bromide.

IC ICM C07C229-16
ICS C12N015-00; A61K048-00
CC 78-1 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 1, 3
IT 226420-73-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fullerene derivs. for potential use in gene therapy)
IT 226420-73-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fullerene derivs. for potential use in gene therapy)
RN 226420-73-1 ZCAPLUS
CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)

PAGE 1-A

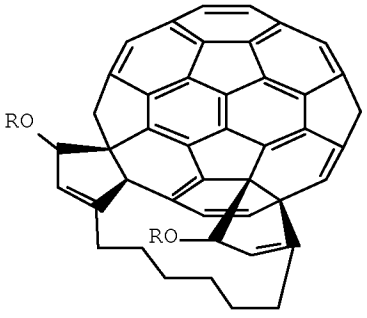


PAGE 2-A



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L64 ANSWER 23 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:285374 ZCAPLUS Full-text
DOCUMENT NUMBER: 131:18823
TITLE: Synthesis and functions of a novel DNA binding fullerene
AUTHOR(S): Isobe, Hiroyuki; Sawamura, Masaya; Sugiyama, Sho; Fukui, Ken-ich; Iwasawa, Yasuhiro; Nakamura, Eiichi
CORPORATE SOURCE: Department of Chemistry, The University of Tokyo, Japan
SOURCE: Tennen Yuki Kagobutsu Toronkai Koen Yoshishu (1998), 40th, 157-161
CODEN: TYKYDS
PUBLISHER: Nippon Kagakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
GI



I

AB Much interest in the biol. activities of fullerenes have been drawn since their first discovery. As one of the first findings of biol. activities, we have already reported the synthesis of water-miscible fullerene carboxylic acid and its biol. activities. Thus, we found that fullerenes show the photo-induced DNA cleaving activity, cytotoxicity and enzyme inhibition. In this study, we further investigated their biol. activities, including distribution anal. of dosed radio-active fullerene and interactions with DNAs. We have synthesized radio-active water-miscible fullerene carboxylic acid by [3 + 2] cycloaddn. of trimethylene methane. When administered orally to rats, fullerene was not efficiently absorbed and was excreted primarily in the feces. When injected i.v., it was distributed rapidly to various tissues, and most of the material was retained in the body after one week. We have expanded fullerene's photo-induced biol. activities, targeting DNAs. Thus, we have designed and synthesized a novel fullerene-oligonucleotide conjugate, and examined its DNA nicking ability. When this conjugate was incubated and irradiated with oligonucleotides with target sequence, site specific nicking of the oligonucleotide was achieved. We further continued investigating the interactions of fullerene with DNAs and found that fullerene-polyamine [I; R = COCH2NMe(CH2)3NMe2] conjugate tightly binds to DNA in a non-specific manner, and this new fullerene gave first example of photo-induced covalent bond formation of fullerene with DNA base.

CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 6

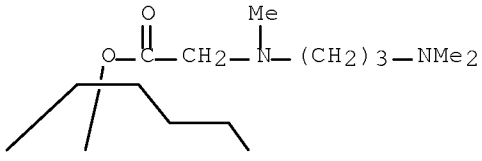
IT 226420-72-0P 226420-73-1P 226420-74-2P 226420-75-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and functions of novel DNA binding fullerene)

IT 226420-73-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and functions of novel DNA binding fullerene)

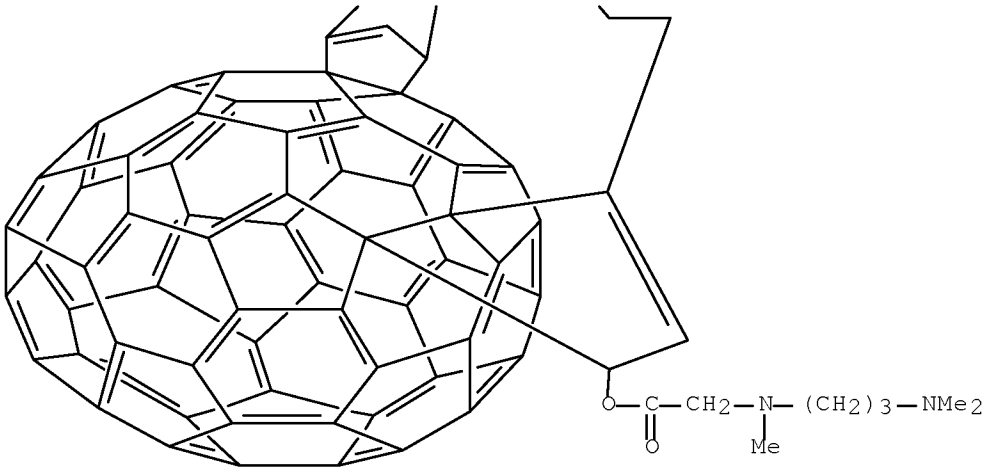
RN 226420-73-1 ZCAPLUS

CN Glycine, N-[3-(dimethylamino)propyl]-N-methyl-, 1,1'-(5',5''-hexano-3'H,3''H-dicyclopenta[1,9:13,14][5,6]fullerene-C60-Ih-3',3''-diyl) ester (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L64 ANSWER 24 OF 24 ZCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:20078 ZCAPLUS Full-text
DOCUMENT NUMBER: 122:10488
ORIGINAL REFERENCE NO.: 122:2333a,2336a
TITLE: Water-soluble fullerene derivatives. Synthesis and characterization of β-alanine C60 adducts
AUTHOR(S): Gan, Liang Bing; Luo, Chu Ping; Xu, Lian Bin; Zhou, De Jing; Huang, chun Hui; Zhao, Shan Kai
CORPORATE SOURCE: Department Chemistry, Peking University, Beijing, 100871, Peop. Rep. China
SOURCE: Chinese Chemical Letters (1994), 5(4), 275-8
CODEN: CCLEE7; ISSN: 1001-8417
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 122:10488

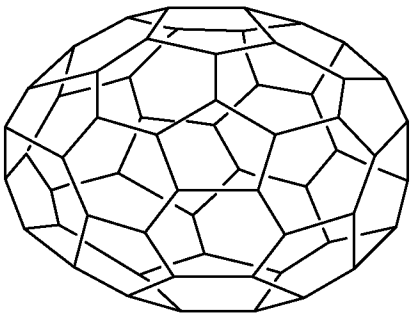
AB β-Alanine sodium salt reacts with C60 to give a water-soluble derivative C60(NHCH2CH2CO2Na)x(H)x (I). Acidification of I yields derivative C60(NHCH2CH2CO2H)x(H)x. Elemental anal. suggest x is equal to 9. 1H and 13C NMR spectra are consistent with the addition of the amino acid through its amino group. These amino acid derivs. are air-stable and may be used as precursors for further functionalization.

CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 24, 78
IT 159475-45-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and acidification of)
IT 159510-93-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 159475-45-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and acidification of)
RN 159475-45-3 ZCAPLUS

CN β-Alanine, N,N',N'',N''',N'''',N''''',N'''''',N''''''',N'''''''',N''''''''-
(octahydro[5,6]fullerene-C60-Ih-nonayl)nonakis- (9CI) (CA INDEX NAME)

CM 1

CRN 159475-44-2
CMF C87 H105 N9 O18
CCI IDS

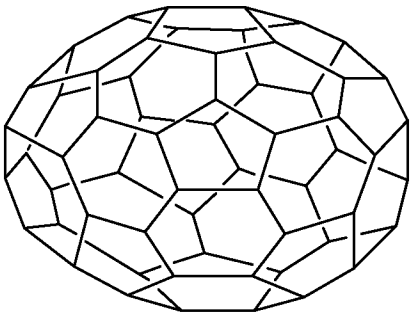


9 [D1—NH—CH_2—CH_2—CO_2H]

IT 159510-93-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 159510-93-7 ZCAPLUS
CN β-Alanine, N,N',N'',N''',N'''',N''''',N'''''',N''''''',N''''''''-
(octahydro[5,6]fullerene-C60-Ih-nonayl)nonakis-, nonasodium salt (9CI)
(CA INDEX NAME)

CM 1

CRN 159475-44-2
CMF C87 H105 N9 O18
CCI IDS



9 [D1—NH—CH_2—CH_2—CO_2H]

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=>  d his full

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L1              1 SEA SPE=ON  ABB=ON  PLU=ON  US2005-559681 /AP
                D SCA

     FILE 'REGISTRY' ENTERED AT 15:16:32 ON 02 JAN 2009
L2              1 SEA SPE=ON  ABB=ON  PLU=ON  99685-96-8
                D SCA

     FILE 'ZCAPLUS' ENTERED AT 15:16:57 ON 02 JAN 2009
L3           2246 SEA SPE=ON  ABB=ON  PLU=ON  L2/D
L4            977 SEA SPE=ON  ABB=ON  PLU=ON  L3 (L) PREP/RL
L5         207299 SEA SPE=ON  ABB=ON  PLU=ON  AMINO ACID?/CW
L6          15098 SEA SPE=ON  ABB=ON  PLU=ON  L5 (L) RACT/RL
L7           4881 SEA SPE=ON  ABB=ON  PLU=ON  L2 (L) RACT/RL
L8             30 SEA SPE=ON  ABB=ON  PLU=ON  L6 AND L7
L9              2 SEA SPE=ON  ABB=ON  PLU=ON  L4 AND L8
                D SCA
L10            28 SEA SPE=ON  ABB=ON  PLU=ON  L8 NOT L9
L11        118009 SEA SPE=ON  ABB=ON  PLU=ON  ?DIAMINO?/BI OR ?TRIAMINO?/BI OR
                DI AMINO?/BI OR ?TRI AMINO?/BI
L12             1 SEA SPE=ON  ABB=ON  PLU=ON  L8 AND L11
                D SCA
                D KWIC
                D BIB
L13             6 SEA SPE=ON  ABB=ON  PLU=ON  L8 AND P/DT
L14            24 SEA SPE=ON  ABB=ON  PLU=ON  L8 NOT L13
L*** DEL        1 S L13 AND PY<2004
L15            13 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND PY<2004

     FILE 'REGISTRY' ENTERED AT 15:33:42 ON 02 JAN 2009
L16               STRUCTURE UPLOADED
L17             5 SEA SSS SAM L16
                D SCA
                D STAT QUE
L18               STRUCTURE UPLOADED
L19               STRUCTURE UPLOADED
L20             5 SEA SSS SAM L18 AND L19
                D SCA
                D STAT QUE
L21           260 SEA SSS FUL L18 AND L19
                SAVE TEMP JEA681L18L19/A L21
L22            37 SEA SPE=ON  ABB=ON  PLU=ON  L21 AND IDS/CI
L23            13 SEA SPE=ON  ABB=ON  PLU=ON  L22 AND C60/CNS
L24            24 SEA SPE=ON  ABB=ON  PLU=ON  L22 AND C82/CNS
L25            37 SEA SPE=ON  ABB=ON  PLU=ON  L23 OR L24
                D SCA L24

     FILE 'ZCAPLUS' ENTERED AT 15:46:53 ON 02 JAN 2009
L26             6 SEA SPE=ON  ABB=ON  PLU=ON  L23
                D IBIB HITSTR 6

     FILE 'REGISTRY' ENTERED AT 15:48:01 ON 02 JAN 2009
L27           223 SEA SPE=ON  ABB=ON  PLU=ON  L21 NOT L22
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L28          39 SEA SPE=ON  ABB=ON  PLU=ON  L27 AND NC>1
                D SCA
L29             STRUCTURE UPLOADED
L30           6 SEA SUB=L21 SSS SAM L29
                D SCA
L31             STRUCTURE UPLOADED
L32           0 SEA SUB=L21 SSS SAM L31
L33           0 SEA SUB=L21 SSS FUL L31
                D STAT QUE L30
L34          70 SEA SUB=L21 SSS FUL L29
L35             STRUCTURE UPLOADED
L36             STRUCTURE UPLOADED
L37           0 SEA SUB=L21 SSS SAM L35 OR L36
L38           0 SEA SUB=L21 SSS FUL L35 OR L36
L39             STRUCTURE UPLOADED
L40             STRUCTURE UPLOADED
L41           2 SEA SUB=L21 SSS SAM L39 OR L40
                D SCA
L42          15 SEA SUB=L21 SSS FUL L39 OR L40
                D SCA

     FILE 'ZCAPLUS' ENTERED AT 16:06:54 ON 02 JAN 2009
L43          15 SEA SPE=ON  ABB=ON  PLU=ON  L42
                SET NOTICE OFF DISPLAY
                SET NOTICE OFF SEARCH
L44          22 SEA SPE=ON  ABB=ON  PLU=ON  RASNETSOV L?/AU
L45          55 SEA SPE=ON  ABB=ON  PLU=ON  SHVARTSMAN I?/AU
L46          13 SEA SPE=ON  ABB=ON  PLU=ON  LYALINA I?/AU
L47          19 SEA SPE=ON  ABB=ON  PLU=ON  RASNETSOVA B?/AU
L48           0 SEA SPE=ON  ABB=ON  PLU=ON  L44 AND L45 AND L46 AND L47
L49          15 SEA SPE=ON  ABB=ON  PLU=ON  L44 AND (L45 OR L46 OR L47)
L50           1 SEA SPE=ON  ABB=ON  PLU=ON  L45 AND (L46 OR L47)
L51           2 SEA SPE=ON  ABB=ON  PLU=ON  L46 AND L47
L52          15 SEA SPE=ON  ABB=ON  PLU=ON  L49 OR L50 OR L51
                SET NOTICE LOGIN DISPLAY
                SET NOTICE LOGIN SEARCH

     FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 16:09:13 ON 02 JAN 2009
L53          14 SEA SPE=ON  ABB=ON  PLU=ON  L52

     FILE 'ZCAPLUS' ENTERED AT 16:09:35 ON 02 JAN 2009
L54       38813 SEA SPE=ON  ABB=ON  PLU=ON  ?FULLEREN?/BI
L55          11 SEA SPE=ON  ABB=ON  PLU=ON  (L44 OR L45 OR L46 OR L47) AND L54

L56          18 SEA SPE=ON  ABB=ON  PLU=ON  L55 OR L52
L57           2 SEA SPE=ON  ABB=ON  PLU=ON  L5 AND (L52 OR L55)

     FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 16:10:59 ON 02 JAN 2009
L58           9 SEA SPE=ON  ABB=ON  PLU=ON  (L44 OR L45 OR L46 OR L47) AND
                ?FULLEREN?
L59           3 SEA SPE=ON  ABB=ON  PLU=ON  (L53 OR L58) AND AMINO ACID?

     FILE 'ZCAPLUS' ENTERED AT 16:11:56 ON 02 JAN 2009
                D STAT QUE L52
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                D STAT QUE L57
L60          18 SEA SPE=ON  ABB=ON  PLU=ON  L52 OR L55 OR L52

     FILE 'MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 16:12:21 ON 02 JAN 2009
                D STAT QUE L53
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                D STAT QUE L58
                D STAT QUE L59
L61          14 SEA SPE=ON  ABB=ON  PLU=ON  L53 OR L58 OR L59

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                     ANSWERS '1-18' FROM FILE ZCAPLUS
                     ANSWER '19' FROM FILE WPIX
                D IBIB ABS HITIND L62 1-18
                D IALL HIT L62 19

     FILE 'REGISTRY' ENTERED AT 16:13:36 ON 02 JAN 2009

     FILE 'ZCAPLUS' ENTERED AT 16:13:40 ON 02 JAN 2009
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                D STAT QUE L43
L63          21 SEA SPE=ON  ABB=ON  PLU=ON  L26 OR L43
                D STAT QUE L9
                D STAT QUE L12
L64          24 SEA SPE=ON  ABB=ON  PLU=ON  L26 OR L43 OR L9 OR L12
                D IBIB ABS HITIND HITSTR L64 1-24


     FILE HOME

     FILE ZCAPLUS

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     FILE COVERS 1907 - 2 Jan 2009  VOL 150 ISS 2
     FILE LAST UPDATED: 1 Jan 2009  (20090101/ED)

     ZCAplus now includes complete International Patent Classification (IPC)
     reclassification data for the third quarter of 2008.

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

       This file contains CAS Registry Numbers for easy and accurate
       substance identification.

     FILE REGISTRY
     Property values tagged with IC are from the ZIC/VINITI data file
     provided by InfoChem.

     STRUCTURE FILE UPDATES:    1 JAN 2009  HIGHEST RN 1092443-48-5
     DICTIONARY FILE UPDATES:   1 JAN 2009  HIGHEST RN 1092443-48-5

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

     TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

       Please note that search-term pricing does apply when
```

conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

FILE MEDLINE
FILE LAST UPDATED: 1 Jan 2009 (20090101/UP). FILE COVERS 1949 TO DATE.

MEDLINE and LMEDLINE have been updated with the 2009 Medical Subject Headings (MeSH) vocabulary and tree numbers from the U.S. National Libra of Medicine (NLM). Additional information is available at

http://www.nlm.nih.gov/pubs/techbull/nd08/nd08_medline_data_changes_2009.

In preparation for the annual MEDLINE reload, NLM suspends delivery of regular updates (completed records), but continues to send "in-process" records. STN will resume regular MEDLINE updates the week of Dec 29, 200

This file contains CAS Registry Numbers for easy and accurate substance identification.

See HELP RANGE before carrying out any RANGE search.

MEDLINE Accession Numbers (ANs) for records from 1950-1977 have been converted from 8 to 10 digits. Searches using an 8 or 10 digit AN will retrieve the same record. The 10-digit ANs can be expanded, searched, and displayed in all records from 1949 to the present.

FILE EMBASE
FILE COVERS 1974 TO 31 Dec 2008 (20081231/ED)

EMBASE was reloaded on March 30, 2008.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

Beginning January 2008, Elsevier will no longer provide EMTREE codes as part of the EMTREE thesaurus in EMBASE. Please update your current-awareness alerts (SDIs) if they contain EMTREE codes.

For further assistance, please contact your local helpdesk.

FILE BIOSIS
FILE COVERS 1926 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 31 December 2008 (20081231/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current BIOSIS indexing.

FILE WPIX
FILE LAST UPDATED: 22 DEC 2008 <20081222/UP>
MOST RECENT UPDATE: 200882 <200882/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE
>>> Now containing more than 1.2 million chemical structures in DCR <<<

>>> IPC Reform backfile reclassifications have been loaded to end of September 2008. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPIC, and 20061231/UPIC, 20070601/UPIC, 20071001/UPIC, 20071130/UPIC, 20080401/UPIC, 20080701/UPIC and 20081001/UPIC.
ECLA reclassifications to mid August and US national classification mid September 2008 have also been loaded. Update dates 20080401, 20080701 and 20081001/UPEC and /UPNC have been assigned to these. <<

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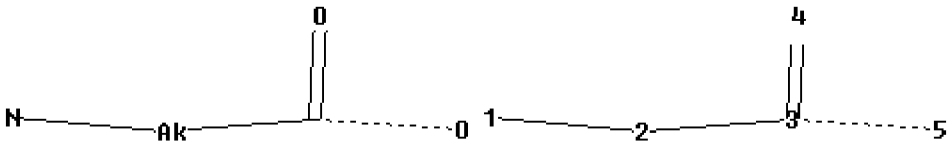
http://www.stn-international.com/DWPIAnaVist2_0608.html

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

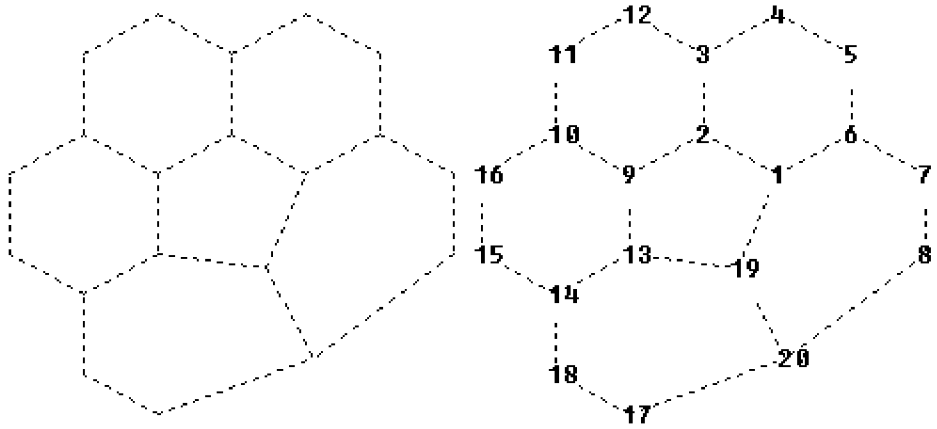
=>
Uploading L18.str



chain nodes :
1 2 3 4 5
chain bonds :
1-2 2-3 3-4 3-5
exact/norm bonds :
3-4 3-5
exact bonds :
1-2 2-3

Connectivity :
2:2 E exact RC ring/chain
Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS
Generic attributes :
2:
Saturation : Saturated

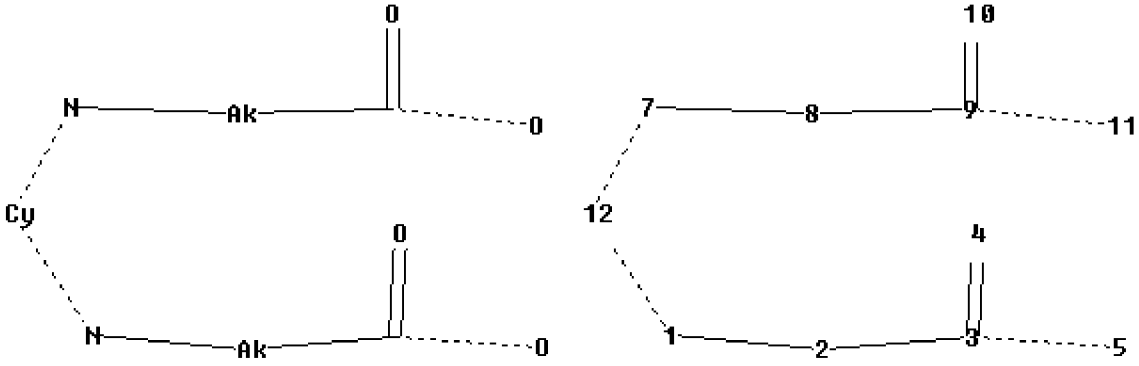
Uploading L19.str



ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
ring bonds :
1-2 1-6 1-19 2-3 2-9 3-4 3-12 4-5 5-6 6-7 7-8 8-20 9-10 9-13 10-11
10-16 11-12 13-14 13-19 14-15 14-18 15-16 17-18 17-20 19-20
exact/norm bonds :
1-2 1-6 1-19 2-3 2-9 3-4 3-12 4-5 5-6 6-7 7-8 8-20 9-10 9-13 10-11
10-16 11-12 13-14 13-19 14-15 14-18 15-16 17-18 17-20 19-20

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom

Uploading L39.str

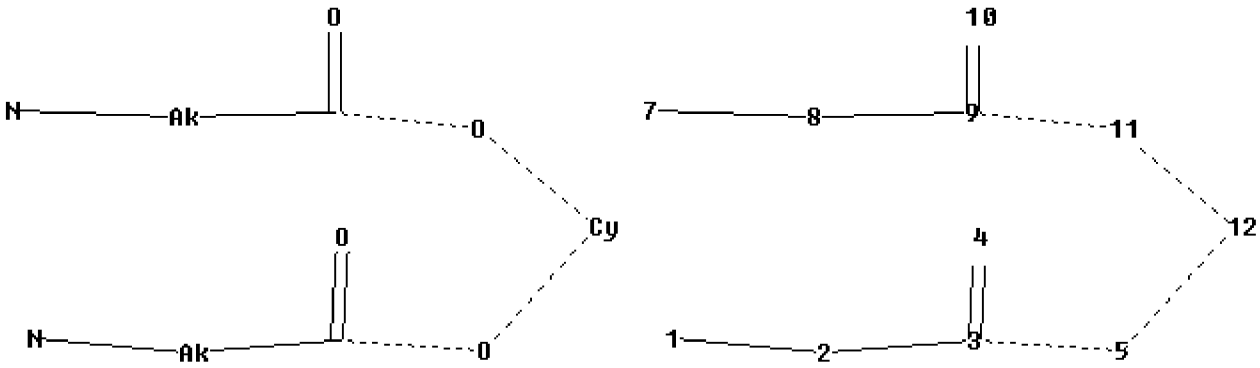


chain nodes :
1 2 3 4 5 7 8 9 10 11 12
chain bonds :
1-2 1-12 2-3 3-4 3-5 7-8 7-12 8-9 9-10 9-11
exact/norm bonds :
1-12 3-4 3-5 7-8 7-12 8-9 9-10 9-11
exact bonds :
1-2 2-3

Connectivity :
2:2 E exact RC ring/chain
Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:Atom
Generic attributes :
2:
Saturation   : Saturated

Element Count :
Node 12: Limited
    C,C55

Uploading L40.str



chain nodes :
1 2 3 4 5 7 8 9 10 11 12
chain bonds :
1-2 2-3 3-4 3-5 5-12 7-8 8-9 9-10 9-11 11-12
exact/norm bonds :
3-4 3-5 5-12 7-8 8-9 9-10 9-11 11-12
exact bonds :
1-2 2-3

Connectivity :
2:2 E exact RC ring/chain
Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:Atom
Generic attributes :
2:
Saturation   : Saturated

Element Count :
Node 12: Limited
    C,C55